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Abstract

COVID-19 has become a crisis that is impacting lives, economies, and ways of life around the world. Governments have responded with policies to support and protect their populations, businesses have closed or restricted access, and consumers have adapted as best as they could. Determining in the short-run how well these policies might be working and the socio-economic impact of the pandemic on individuals and households resulted in new data collection efforts worldwide and the greater use of rapid response surveys. This research reports one such effort in the United States (U.S.) to collect data using the Household Pulse Survey (HPS), with a focus on the use of government provided economic impact or stimulus payments by households. These payments were expected to have maximum and immediate impacts. Results reveal that household were most likely to use their economic impact payments to pay off debt as opposed to meeting their spending needs. Respondents who report lower levels of subjective well-being are more likely to use the stimulus payment to "mostly pay off debt" The probability of using the stimulus payment to "mostly pay off debt" increases as subjective assessments of well-being worsen. This research is one of the earliest to examine the role subjective assessments of well-being play in determining consumer response to receipt of economic impact payments during the COVID-19 pandemic.

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Introduction

On December 31, 2019, China announced a cluster of, what would eventually become known as COVID-19, cases in Wuhan. In a relatively short period of time the number of COVID-19 cases grew exponentially and spread throughout the world. As of April 14, 2021, approximate 140,000,000 cases have been reported with 3,000,000 deaths.[1] COVID-19 has become a crisis that is impacting lives, economies, and ways of life around the world. And in response, from March 2020 through today, governments have responded with policies to support and protect their populations, businesses have closed or restricted access, and consumers have adapted as best as they could. Yet, in the spring of 2020, the future extent and severity of the pandemic was unknown; however, governments responded with strict policies to help limit the spread of the disease. While these policies may have helped limit the spread of COVID-19, they created hardships that were felt by both consumers and businesses. In response, governments implemented broad policies to help mitigate these hardships. Government policies include those to financially support individuals and households through special one-time income payments and as well as additional support related to food, housing, education, and job loss. Whether these policies would be effective or not was unknown for the most part, although past research[2] was considered. But whether these policies would be effective in dealing with the impact of the COIVD-19 pandemic was unknown; the world's most recent experience with a widespread pandemic was in 1918.[3] In the spring of 2020, there was a lack of information about the possible severity and length of the pandemic and the potential impact on individuals and households. To fill this gap, researchers in national statistical offices as well as other economists, other social scientists, and epidemiologists in universities and research institutes have been involved in large data collection initiatives across the world to assess the impact of the COVID-19 pandemic. Because of the inherent lag associated with data collection, some early assessments were based on microsimulations (e.g., see Figari and Fiorio 2020, Lustig et al. 2020; Martin et al. 2020; O'Donoghue et al. 2020; Wu 2020).[4]

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[1] https://coronavirus.jhu.edu/map.html

[2] For example, based on research of the effectiveness of tax rebates and one-time income supports provided in the U.S. in response to the 2001 and 2008 recessions (e.g., Agarwal et al. 2007; Johnson et al. 2006; Parker et al. 2013; Sahm et al. 2010, 2012), early U.S. government policy response to the COVID-19 pandemic was to again provide income support to individuals and households through one-time stimulus payments. The expectations was that the COVID-19 pandemic would result in a recession similar to these earlier periods and that such payments would provide similar impacts. (see U. S. Congressional Research Service 2020). What is different about the current recession is that many business closed or reduced hours, workers lost their jobs or were forced to work from home, and there was an increased fear of contracting COVID-19; all of these impact how effect such payments would be in the current environment.

[3] See https://www.cdc.gov/flu/pandemic-resources/1918-pandemic-h1n1.html

[4] For example Figari and Fiorio (2020) studied the extent to which the Italian welfare system would provide monetary compensation for those who lost their earnings due to the lockdown imposed by the government in order to contain the COVID-19 pandemic using EUROMOD, the EU-wide microsimulation model, integrated with information on the workers who the lockdown is more likely to affect. Also using EUROMOD, Almeida *et al.* (2020) simulate separately the effect of the pandemic and the policy responses in 27 European countries. Also see O'Donoghue et al. (2020) who used a microsimulation

Early responses to collect data were introduced by national and cross-national statistical offices and organizations through the development of rapid response or real time surveys or by adapting current surveys. One such response was by the U.S. Census Bureau in coordination with other U.S. government agencies to design a rapid response survey to document temporal trends in how individuals are experiencing business curtailment and closures, stay-at-home orders, school closures, changes in the availability of consumer goods and consumer patterns, and other abrupt and significant changes to life in the U.S. from a social and economic perspective. The survey is known as the Household Pulse Survey (HPS), with data collection beginning in April 2020 and continuing through the summer of 2021 (U.S. Census Bureau 2021). Survey questions focus the impacts of COVID-19 on education, employment, food security, health, housing, transportation, social security related benefits, job loss, teleworking, intention to receive a COVID-19 vaccination, and consumer spending responses associated with receipt of federally legislated income stimulus payments.

The purpose of this research is to study how consumers report using the income payments from the U.S. federal government as they experience the COVID-19 pandemic and associated hardships using the HPS. These payments are official known as recovery rebates but colloquially referred to as economic impact payments or stimulus checks. Three pieces of legislation have provided for the distribution of these payments with the first passed in March 2020, followed by a second in December 2020, and the most recent in March 2021.[5] A key component of each piece of legislation was to provide one-time income payments to individuals and families with the size of the payments to be based on household income and composition (e.g., number of adults and children). The function of each stimulus payment distribution has been to strengthen

approach to generate counterfactual income distributions as a function of more timely external data than are available in dated income surveys. They combined "nowcasting" methods using publicly available data and a household income generation model to perform the first calibrated simulation based upon actual data, aiming to assess the distributional implications of the COVID-19 crisis in Ireland. Lustig et al. (2020) use microsimulation to estimate the distributional consequences of covid-19-induced lockdown policies in Argentina, Brazil, Colombia and Mexico. They examine the impact of possible expanded social assistance on inequality, poverty and mobility in Argentina, Brazil, Colombia and Mexico. Martin et al. (2020) used microsimulation to model and estimate the direct impact of distancing on household income, savings, consumption, and poverty, focusing on the San Francisco Bay Area as a case study. They used Census tract data to build a household-level economic model and divided into two periods, the crisis period and recovery period. Wu (2020) constructed a theoretical model to study the macroeconomic impact of the COVID-19 pandemic. To estimate the theoretical model, he used Penn World Table data from 138 countries for the period from 1996 to 2017. His focus was on the impact on gross fixed capital formation, government consumption, balance of trade, and the Pandemic Uncertainty Index negatively affect household consumption.

[5] Early government response in the U. S. to the COVID-19 pandemic and its expected impact on individuals and families was to pass the Coronavirus Aid Relief, and Economic Security (CARES) Act on March 27, 2020. As the pandemic continued, with associated financial distress experienced by individuals and families, additional legislation, the Coronavirus Response and Relief Supplemental Appropriations Act, was passed on December 21, 2020; economic stimulus payment provisions were similar to those in the first Act. As of this date, a third set of stimulus payments are available with the passage of the American Rescue Plan Act of 2021 on March 12, 2021.

the social safety net which was expected to be strained due to people losing their jobs, getting furloughed, or having to stay home without pay. The payments were expected to have maximum and immediate impacts as opposed to payroll tax cuts or income tax credits. Other provisions of the U.S. federal government response include additional unemployment benefits; however, the impact of these are not addressed in this research.

Consumer response to receipt of the economic stimulus payments is defined in terms of whether they or their households used the payments to mostly for spending, savings, or to pay off debt in the past 7 days. In addition to the role of household demographics impacting respondent reported choice, subjective assessments of their own economic well-being are also considered. The subjective measures include whether or not the household expects someone within it to loose employment, whether or not the household has found it difficult to pay for expenditures, changing buying behavior because of concerns about the economy, food insufficiency, depression, anxiety, delayed medical treatment, unconfident about being able to pay next month's rent/mortgage, whether next month's rent/mortgage payment was deferred, and worry about being evicted or having their mortgage foreclosed. Although questions about economic impact payments were added to the HPS in June and July 2020 to assess the impact of the first round of one-time payments, the full set of subjective assessments was not collected until several months later (with data collected from October 2020 through March 2021). Questions regarding receipt and use of the economic impact payments that span this same time period were collected only from early January through mid-March 2021. The aim of adding these questions to the HPS at this time was to capture the impact of the second legislation passed on December 21, 2020.

In this paper, we provide a qualitative assessment of the impact of households receiving stimulus payments that stem from the COVID-19 outbreak that caused widespread business and government shutdowns, focusing on reported use of the payments in the past 7 days as opposed to revealed preferences based on actual spending. This research represents the first study to examine the consumer response to receipt of economic impact payments provided by the second legislation passed in the U.S. to address the financial needs of individuals and families. We use a multinomial logit framework to analysis how the stimulus payment is used, which stands in contrast to previous work that uses univariate (e.g., Akana 2020a, 2020b, Garner et al. 2020a, 2020b) or a probit (see Dietrich et al. 2020) analysis.[6]

While earlier research (e.g., Baker et al. 2020c; Johnson et al. 2006, Parker et al. 2013; Parker and Souleles 2019) used stimulus payment receipt in combination with dollar values of spending to estimate marginal propensities to consume (MPC), an alternative approach is applied in this study. Using responses to the use of stimulus payments for specific types of spending, w create a measure of spending diversity. The more categories selected, the more

[6] Akana (2020a, 2020) analyzed Federal Reserve Bank of Philadelphia to examine how respondents reported spending the first stimulus payment on select bundles of goods and services. Dietrich et al. (2020) analyzed Federal Reserve Bank of Cleveland data to examine housing spending behavior response to receiving the first stimulus payment with data collected in March and April 2020.

diverse the spending. We then estimate how demographic characteristics and measures of well-being affect this measure of spending diversity, which refer to as the marginal propensity to click ("MPC").[7] Also, although earlier studies have considered the effect consumers' expectations regarding the economy and inflation and expected job loss on consumer spending and the use of stimulus payments (e.g., Baker et al., 2020c and Coibion et al. 2020), this work is the first to examine the role individual perceptions of well-being used in combination with decisions consumers' reported use of the payments. An advantage of the HPS over other data sets used to assess the socio-economic impact of COVID-19 on households in the U.S. (e.g., the Survey of Consumers conducted by the University of Michigan and University of California Survey) is data are collected from very large samples of individuals (around 100,000) with data collected from respondents in every state within the U.S. As with other select rapid response surveys, for example those designed to collect COIV-19 impact data and conducted by the ABS in Australia (2021a) and Office of National Statistics in the UK (2021), HPS data can be used within weeks data collection rather than having to wait months.

Major findings from this study include the following:

- Receipt of the stimulus payment, as measured by the HPS, is in line with the eligibility criteria laid out by U.S. government legislation passed and implemented.
- Greater use of the second stimulus payment for debt, about 50 percent of respondents reporting this use is consistent with the use of the first payment as reported by others (see, Coibion et al. 2020 and Sahm et al. 2020).
- Reported use of the second stimulus payment was equally reported for spending and savings, marginally lower than 25%. This is in contrast to reported use of the first payment for which greater savings use was reported (see Coibion et al. 2020 and Sahm et al. 2020).
- Respondents with higher levels of income are more likely to report "mostly spending" the stimulus payment, whereas lower income respondents are more likely to report "mostly paying off debt".
- We find that younger respondents are more likely to report using the stimulus payment for debt or savings, compared to older respondents who are more likely to report spending the stimulus. Black, non-Hispanic and Hispanic respondents are more likely to report using the stimulus payment for debt relative to white, non-Hispanic respondents. Asian, non-Hispanic households are less likely to report using the stimulus payment for debt.
- Respondents who report lower levels of subjective well-being are more likely to use the stimulus payment to "mostly pay off debt" The probability of using the stimulus payment to "mostly pay off debt" increases as subjective assessments of well-being worsen.
- Lower levels of subjective assessments of well-being are related to increases in the reported diversity of how the stimulus payment is used (i.e. "Marginal Propensity to Click").

[7] We use the term "click" since the HPS is an online survey, and respondents who report more diverse spending will have to "click" on more categories.

This research contributes to the larger body of research assessing the socio-economic impact of national government policies to mitigate the hardship experienced by individuals and households during the COVID-19 pandemic. These findings suggest that households with a lower view of their well-being put the stimulus payment towards debt, it should be noted that the ways in which households believe they are suffering will influence how they spend their stimulus payment. This finding is consistent with the economic literature on the role of economic expectations on spending (most notably with regard to the 2020 pandemic and the findings of Baker et al., 2020c and Coibion et al. 2020).

The remainder of this paper is divided into four sections. In the next section we provide a more detailed discussion of the related literature. Following this discussion, we present an overview of the U.S. federal response to the pandemic and legislation that provides for the economic stimulus payments. The next two sections describe the Household Pulse Survey data and present the results of our analysis. Finally, we summarizes our findings and discusses potential future directions.

Related Literature

This paper joins a fast-growing literature on the socio-economic impacts of the COVID-19 pandemic on individuals and households, government policy responses, and data collection efforts to assess these. One invaluable source of data for this body of research has been the development of rapid response surveys. These are surveys that focus on quick dissemination with data released shortly after collection in order to provide near "real time" measures. A national office statistical survey, similar to the U.S. HPS data collection, the Australian Bureau of Statistics (ABS) has been collecting data using the Household Impacts of COVID-19 Survey using two-week and monthly surveys since early April 2020 (ABS 2021a). Data are collected on select topics including employment status, emotional and mental well-being, and the use of stimulus payments on spending; data are released monthly (ABS 2021b). For multiple countries, rapid response phone survey data are being collected by national statistical offices in various low income countries in coordination with the World Bank as part of the Living Standards Measurement Study, with data are collected on social safety needs, food security, coping, preventive behaviors, and subjective well-being. Data are downloadable from the World Bank website (2021) with comparable data for 44 countries shown on the Bank's COVID-19 High Frequency Dashboard (World Bank 2020).[8] Government agency efforts to collect rapid response data cross-nationally in Europe include those by Eurofound (2020), a tripartite European Union Agency. Data collection began in Europe in April 2020 to examine the far-reaching socioeconomic implications of the pandemic across Europe as they continue to impact living and working conditions.

[8] These data have been used by Josephson et al. (2021) to study the effects the pandemic has had on income and student-teacher contact in select countries in Ethiopia, Malawi, Nigeria, and Uganda. Khamis et al. (2021) used the data to study labor market impacts in developing countries.

Social and economic impacts of the COVID-19 pandemic are being assessed using data not only from rapid response surveys but also from adaptations to current surveys, regularly collected household survey data and high frequency transaction data. For example, in contrast to the U.S. and ABS efforts, the U.K. Office of National Statistics (ONS) responded with the adaptation of the Opinions and Lifestyle Survey to become a weekly survey with data on the impact of the COVID-19 pandemic on day-to-day life of individuals and households; this began in March 2020 and continues (see UK ONS).[9] Topics covered in the survey include how COVID-19 has impacted respondents' ability to work and socialize, their response to government actions like forced lockdowns, and use of protective measures. Quasi-government organizations, like the U.S. Federal Reserve Banks, have also developed rapid response surveys with a focus on the economic impact on individuals and households with questions asked about receipt and use of the economic stimulus payments (e.g., see Akana 2020b, Dietrich et al. 2020, Knotek et al. 2020).

University- and research center- based surveys also abound. For example, these include, for the U.S., the Survey of Consumers conducted by the University of Michigan, with economic stimulus payment and related questions added to the regular survey (see Sahm et al. 2020) and the Understanding Coronavirus In America tracking survey conducted by the University of Southern California Dornsife Center for Economic and Social Research (see Kapteyn et al. 2020).[10] Oliver et al. (2020), a multinational team of researchers, conducted a rapid response survey in Spain to quickly assess the impact of a pandemic on work, confinement, and health, and attitudes regarding the government response to the pandemic. For Europe more broadly, researchers from the University of Luxembourg began collecting data, starting in May 2020 from respondents in several European countries using the COME-HERE (Covid-19) survey. Using data collected using the COME-HERE survey, Clark et al. (2020) track income inequality during COVID-19 in France, Germany, Italy, Spain and Sweden from January through September 2020, Menta (2021) used the data for these same countries and over the same time period to investigate how income distributions and poverty rates changed. D'Ambrisio et al. (2020) also used these data to study how individuals have suffered the most from the Covid-19 pandemic in terms of their mental-health, well-being, and living. To study labor market impacts of the COVID-19 shock, Adams-Prassl et al. (2020) collected primary survey data in late March and early April 2020 from large geographically representative samples of individuals in the United States, the United Kingdom and Germany. Belot et al. (2020) designed their own survey and collected in April 2020 with representative samples from six countries (China, South Korea, Japan, Italy, the UK and the four largest states in the US.); the survey was used to collect data on work and living situations, income, behavior (such as social-distancing, hand-washing and

[9] For examples of studies using these data see Beynon and Vassilev (2021) who used these data, in combination with other data, to study the personal and economic well-being to understand the impact of the coronavirus (COVID-19) pandemic on people and households in Great Britain. Beynon and Vassilev (2021) use the data, in combination with other ONS data, to understanding how the coronavirus has affected society, work, mobility and consumer consumption during the different lockdown periods; the data analyzed mostly cover the period 20 March to 20 December 2020. Weekly Vizard et al. (2021) produce statistics on COVID-19 and the social impacts on Great Britain.

[10] For academic papers using the USC data, see https://uasdata.usc.edu/index.php .

wearing a face mask), beliefs about the COVID-19 pandemic and exposure to the virus, socio-demographic characteristics, and pre-pandemic health characteristics. Other leading university research includes work by Fetzer et al. (2020) who collected data in late March and early April 2020 from 58 countries focusing primarily on the beliefs and attitudes towards citizens' and governments' responses to the COVID-19 pandemic.

In addition, national statistical office data are being used to provide assessments of the pandemic on individuals and households using regularly collected household survey data. For example, Coffey et al. (2021), researchers from the Economic and Social Research Institute in Dublin used Household Budget Survey data, collected by the Ireland Central Statistical Office, to assess the impact of the pandemic on consumer spending and implications for indirect tax receipts in 2020. The U.S. Bureau of Labor Statistics added questions to the interview portion of the Consumer Expenditure Survey (CEQ) to measure receipt and use of the economic stimulus payments in the previous three months. The questions added to the CEQ were similar to those included in the 2008-2009 CEQ, which focused on the receipt and use of the 2008 stimulus payments. Table 10 in the Appendix presents a comparison of the uses of the 2008 and 2020 stimulus payments as measured by the CEQ.[11]

Li et al. (2020) combine Australian Bureau of Statistics Longitudinal Labour Force Survey data collected from February to June 2020 with Survey of Income and Housing from 2017-2018 and administrative payroll and tax data to conduct a near real-time analysis of the income distribution effects of the COVID-19 crisis in Australia. Han et al. (2020) use national statistical office data for the U.S. to assess the impact of the pandemic on income and poverty, with simulations of the potential impact of economic stimulus payments and expanded unemployment benefits; these data were collected from January through June 2020 using the Basic Monthly Current Population Survey (CPS).

Other data used to assess the economic impact of the COVID-19 pandemic on consumers are based on private sector sources. Here we focus on university lead efforts. For example, Baker et al. (2020) used high frequency bank account transaction data (i.e., the Fintech firm, SaverLife) in combination with data collected with a special that they designed. Data were linked to study how economic expectations impact household response to the first U.S. legislation that provided for economic stimulus payments. About 1,000 respondents to the e-survey are able to be linked. For this specially designed survey, respondents were asked about their beliefs regarding personal unemployment, income, government benefits and taxes, as well as expectations about the stock market and the duration of the pandemic. Another example of research based on a private sector source, Coibion et al. (2019; 2020) developed a series of customized surveys in cooperation with AC Nielsen, a global market research firm. These surveys are referred to as the Chicago Booth Expectations and Communication Survey with Nielsen Homescan Panel participants asked to participate. In July 2020 respondents were asked

[11] An analysis about the receipt and use of the 2020 stimulus payments using the CEQ is forthcoming (Erhard et al. 2021).

how the first stimulus payments affected consumer behavior with regard to how they spent the payments and the amount allocated to the purchase of various commodities and services. Other questions focused on macroeconomic expectations of respondents, questions on their spending and investment patterns, and questions on their labor market status.

Other data collection focused on consumer spending is based on high frequency transition data. For example, early in the pandemic Chetty et al. (2020) began building a publicly available database that tracks economic activity at the U.S. zip code level in real time using anonymized high frequency transaction data from private companies. Data are available from January 2020 forward. Consumer spending data are from Affinity Solutions, who collects data on credit and debit card spending, and CoinOut, who collected data on cash based spending. Chetty et al. analyze these data to show changes in consumer spending by sector, income, and time period with respect to stimulus payment distribution. High frequency transaction data have also been used by other researchers to study the impact of the pandemic on consumption and consumer spending. For example, Chen et al. (2020) analyze data from Spain, Denmark, France, and China, and Bounie et al. (2020) used data from France.

All of the current work analyzing consumers' response to the pandemic and receipt of stimulus payments joins an extensive body of literature on consumers' responses to previous stimulus payments. For example, using spending data from the U.S. Consumer Expenditure Survey, Johnson et al. (2006) and Parker et al. (2013) examine consumer spending and the relationship with receipt of the 2001 tax rebates and 2008 economic stimulus payments. Broda and Parker (2014) use the Nielsen Homescan Panel data and to examine spending the week after receiving the 2008 stimulus payments. Parker and Souleles (2019) compare results from the Consumer Expenditure Survey with Nielsen Homescan Panel data to examine reported effects and willingness to spend in response to the 2008 stimulus payments. Using University of Michigan Survey of Consumers data, Shapiro and Slemrod (2003a, 2003b) examines the impact of the 2001 tax rebate on consumer spending. Sharpiro and Slemrod (2009) and Sahm et al. (2010) also use this survey to examine the impact of the 2008 tax rebate stimulus. All studies found that about half of the respondents reported using both the 2001 and 2008 payments to pay off debt while about 30 percent reported using these for savings, with the remainder using them for spending. However, Sahm et al. (2012) find a greater impact on consumer spending from receipt of the 2008 economic stimulus payments the longer the time between receipt and when surveyed.

U.S. Federal Response

The purpose of this section is to provide the reader with an overview of the U.S. federal response to the coronavirus pandemic as well as some general details about the various legislative actions taken. The first subsection provides a general overview of the U.S. Federal response to COVID-19. The next subsection summarizes three of the main relief acts passed by Congress. The final subsection provides a more detailed discussion of the recovery rebates that were included in the relief acts.

A. Timeline of U.S. Federal Response to COVID-19

On January 20, 2020 the U.S. announces its first case of COVID-19. Shortly after, on January 27, the U.S. Coronavirus Task Force begins daily meetings. Alex Azar, the head of the task force, holds a press briefing the following day during which he informs the public that the Department of Health and Human Services has been monitoring the virus and preparing a response since December.

On February 2 the federal government suspended entry into the U.S. of "immigrants or nonimmigrants, of all aliens who were physically present within the People's Republic of China." This suspension comes after 45 other countries implemented travel restrictions on China. During this time the number of new COVID-19 cases within the U.S. remained low; however, on February 25, the director of the Center for Disease Control's (CDC) National Center for Immunization and Respiratory Diseases, states that community spread within the U.S. in inevitable and Americans should prepare for severe disruptions to everyday life.

The World Health Organization declares that COVID-19 is a global health pandemic on March 11, 2020. Two days later, on March 13, then President Trump declares the coronavirus a national emergency. Federally social distancing guidelines are announced on March 16. These guidelines were to be in place for two weeks, but subsequently extender through the month of April. It should be noted these guidelines were not mandated and no nationwide stay-at-home order was implemented. The Federal government allowed states to implement their own stay-at-home orders.

Over the next few months, the U.S. would follow a similar trajectory as other countries. A significant shortage of personal protective and hospital equipment would fuel fears of surges in the number of new cases and pleas for social distancing policies to be followed. State level stay-at-home orders were implemented, relaxed, and re-imposed in response to the fluctuating level of coronavirus cases. The lack of national response lead Americans to have vastly different pandemic experiences; however, one universal hardship was the negative impact the pandemic had on the economy.

In response to the significant negative impact the pandemic has had on the U.S. economy, the Federal government has enacted six emergency supplemental funding bills.[12] The first bill, the Coronavirus Preparedness and Response Supplemental Appropriations Act (P.L. 116-123), was enacted on March 6, 2020. This act included $3 billion for research and development of vaccines, as well as therapeutics and diagnostics, $2.2 billion in public health funding to aid in prevention, preparedness and response efforts, almost $1 billion for medical supplies and health-care preparedness, and $1.25 billion to fight COVID-19 internationally.

[12] President Trump also signed four executive orders on August 8, 2020 that deferred payroll taxes, set up an assistance program for lost wages to supplement unemployment benefits ($300 payment per week), extend the federal moratorium on evictions, and defer student loan payments. See https://www.jdsupra.com/legalnews/president-trump-s-aug-8-tax-executive-79448/ for further information on the executive orders.

A little less than two weeks later, on March 18, the Families First Supplemental Appropriations Act (P.L. 116-127) was enacted. The main provisions of this bill were tax credits for businesses to allow them to provide paid sick and emergency leave, expansions of food and nutritional service programs, increases to Medicaid funding for states, and grants to states for processing and paying unemployment insurance (UI) benefits. The bill also provided free COVID-19 testing for all Americans, regardless of insurance status or ability to pay.

The largest of the six bills, the Coronavirus Aid, Relief, and Economic Security (CARES) Act (P.L. 116-136), was signed into law on March 27, 2020. It provided $2 trillion in relief to individuals, businesses, and government organizations through the creation of the Paycheck Protection Program (PPP), an additional $600 per week in UI benefits, a recovery rebate, and payments to states for expenses related to COVID-19. Additional funding for the PPP as well as small business disaster loans and grants for hospitals and health care providers was provided with the signing of the Paycheck Protection Program and Health Care Enhancement Act (P.L. 116-139) on April 24, 2020.

The final two installments of pandemic relief, the Coronavirus Response and Relief Supplemental Appropriations Act (Coronavirus Relief Act) (P.L. 116-260) and the American Rescue Plan Act of 2021 (P.L. 117-7), were enacted on December 27, 2020 and March 11, 2021, respectively. The Coronavirus Relief Act provided an additional $300 per week in UI benefits, additional funding for the PPP, a second round of recovery rebates, among other things. A few of the main provisions of the American Rescue Plan Act are funding for COVID-19 vaccines and testing, additional funding for the PPP, a third round of recovery rebates, and an increase in the Child Tax Credit. More details about the Coronavirus Relief Act, the American Rescue Plan Act, and the CARES Act will be provided in the next section. We choose to highlight these three bills because the focus of this paper is analyzing the use of the recovery rebates, which were included in only these three bills.

B. U.S. Pandemic Relief Acts

Table 1 highlights some of the main benefits included in the CARES Act, Coronavirus Relief Act, and American Rescue Plan Act.[13] All three laws provided relief to businesses through the Paycheck Protection Program (PPP) as well as various tax credits. The PPP provides loans to qualifying businesses. The loan could be used to cover the cost of payroll as well as be used to pay interest on mortgages, rent, and utilities. The goal of this program was to incentivize businesses to keep their workers on payroll. The Federal government also provided additional incentive for businesses to keep employees on the payroll through the Employee Retention Credit, which allowed qualifying businesses to offset some of their current payroll tax liabilities. Businesses were also given a credit that could be applied to their payroll taxes to help offset the cost of required paid sick leave and paid family leave for employees who were dealing with certain consequences of the pandemic.

[13] Note, Table 1 does not provide a complete summary of the benefits provided by the each piece of legislation. The exact text for each Act can be found on www.congress.gov.

Not all businesses were able to maintain their payrolls even with the relief provided by the Federal government. For employees who were became unemployed as a result of the pandemic, all three laws provide additional UI benefits on top of the benefits already provided by states. The CARES Act adds $600 per week to the UI benefits provided by the state. This provision expired on July 31, 2020. The Coronavirus Relief Act reestablished a federal supplement to UI benefits. The law increased UI benefits by $300 per week and was set to expire on March 14, 2021. The American Rescue Plan Act extended this benefit until September 6, 2021.

Relief to individuals was also provided through increases in SNAP benefits, housing assistance, deferment of student loan payments, and changes to the Child Tax Credit. The bills provided additional funding for SNAP in order to offset the expected cost of additional applications as well as improve SNAP's online purchases program and other technology. The Coronavirus Relief Act and American Rescue Plan Act also increased SNAP benefits by 15%. All three bills provided funding for rental assistance programs. The CARES Act also established a moratorium on evictions that expired on July 31, 2020. On September 4, 2020 the CDC reinstated the moratorium on evictions under Section 361 of the Public Health Service Act.[14] The Coronavirus Relief Act extend this moratorium through January 31, 2021. The American Rescue Plan did not include any provisions about extending the eviction moratorium, but the CDC declared an extension of the moratorium until March 31, 2021. On March 29, 2021 the CDC announced that it will again extend the eviction moratorium, this time, through June 2021.

Only the CARES Act included a provision to defer student loan payments. However the previous administration signed an executive order on August 8, 2020 that extended the deferment of

[14] Additional information about the declaration made by the CDC which established the memorandum on evictions can be found on the CDC website.

Table 1: U.S. Pandemic Relief Acts[a]

	CARES Act	Coronavirus Relief Act[b]	American Rescue Plan Act
Date Enacted	March 27, 2020	December 27, 2020	March 11, 2021
Total Funding	$2.2 trillion	$0.9 trillion	$1.9 trillion
Recovery Rebate	• $1,200/$2,400 for individuals/ couples • $500 per dependent under age 17 • Phase out begins at $75,000 for individuals and $150,000 for couples • Rebate phased out at a rate of $5 for every $100 over threshold. For individuals or couples with no children complete phase out will occur at $99,000 and $198,000, respectively.	• $600/$1,200 for individuals/ couples • $600 per dependent under age 17 • Phase out begins at $75,000 for individuals and $150,000 for couples • Rebate phased out at a rate of $5 for every $100 over threshold. For individuals or couples with no children complete phase out will occur at $87,000 and $174,000, respectively.	• $1,400/$2,800 for individuals/couples • $1,400 per dependent • Dependents under age 19 or under age 24 if the dependent is a student qualify for the rebate • Dependents age 19 or old are eligible for the rebate assuming they meet the necessary qualifications • Phase out begins at $75,000 for individuals and $150,000 for couples • Rebate is phased out completely for individuals with income above $80,000 and couples with income above $160,000.[c]
Aid to Businesses	• Establishment of the Paycheck Protection Program (PPP) • Delay payment of employer payroll taxes • Refundable payroll tax credit for 50% of wages paid to employees, up to $10,000 per employee, through Dec 31, 2020 for qualifying businesses	• $248 billion of additional funding for the PPP and expands eligibility for non-profits • Extension for the payroll tax credit through July 1, 2021 • Extension of tax credits established in the Families First Coronavirus Response Act for paid sick and family leave through March 2021	• $7.25 billion of additional funding for the PPP and further expands the types of businesses that qualify • Extensions of the payroll tax credit through December 2021 • Extension of the tax credits for paid sick and family leave through September 2021

[a] Information presented in this table was compiled by the authors from the following sources: the CARES Act (P.L. 116-136), Coronavirus Relief Act (P.L. 116-260), and the American Rescue Plan Act of 2021 (P.L. 117-7).

[b] The Coronavirus Relief Act was passed as a part of the $1.4 trillion omnibus, which provides funding for the federal government for the 2021 fiscal year.

[c] Since the income threshold for $0 recovery rebate is fixed the rate at which the rebate will be phased out for incomes over the $75,000 (individuals) and $150,000 (couples) threshold will depend on the total rebate for which the household is eligible.

Table 1 (Continued): U.S. Pandemic Relief Acts

	CARES Act	Coronavirus Relief Act	American Rescue Plan Act
Unemployment Insurance (UI) Benefits	• Additional $600 per week • Adds 13 weeks to the 26 week period benefits can be accessed • Expand coverage to include independent contractors, part-time workers, and gig economy employees	• Addition $300 per week, which replaced the $600 per week that expired on July 31, 2020 • Adds an additional 11 weeks to the period benefits can be accessed (for a combined maximum of 50 week)	• Extends the additional $300 per week until September 6, 2021 • Creates a $10,200 tax exclusion for unemployment compensation for the 2020 tax year
Food Assistance	• Additional funding for the Supplemental Nutrition Assistance Program (SNAP) to help cover the expected cost of new applications • Funding for schools to have more flexibility in providing meals for students	• 15% increase in monthly SNAP benefits from January 1, 2021 through June 30, 2021 • Extends SNAP benefit eligibility to qualifying college students • Provides funding to improve SNAP online purchasing and technology improvements	• Extends 15% increase in monthly SNAP benefits through September 30, 2021 • Additional funding to further improve SNAP online purchasing and technology improvements
Housing Assistance	• Funding for rental assistance programs • Establishment of a 120-day national eviction moratorium for non-payment of rent	• Additional funding for rental assistance programs • Extension of the eviction moratorium established by CDC (September 4, 2020) through January 31, 2021	• Additional funding for rental assistance programs
Student Loan Payments	• Defer loan payments, principal, and interest payments until Sept 30, 2020		
Child Tax Credit		• Income from 2019 will be used to determine eligibility for the 2020 tax year	• Increases the Child Tax Credit from $2,000 to $3,600 for children under age 6, and $3,000 for other children under age 18 • Increases maximum qualifying age from age 16 to age 17 • Credit is now fully refundable

student loan payments until December 31, 2020 (Executive Order 85 FR 49585, 2020), and on December 4, 2020 the Department of Education announced that the deferment would be further extended through the end of January 2021.[15] On January 21, 2021 the Department of Education announced that it extended the freeze on student loan payments through September 2021. Finally, the Coronavirus Relief Act and American Rescue Plan Act included provisions that modified the Child Tax Credit. The Coronavirus Relief Act allows income from 2019 to be used to determine eligibility for the Child Tax Credit in the 2020 tax year. The American Rescue Plan Act increased the Child Tax Credit from $2,000 to $3,600 for children under age 6 and $3,000 to children under age 18. This provision also increases the age cut off for the Child Tax Credit from age 16 to age 17.

While all the provisions discussed above are important and many households found them to be a crucial source of relief, this work chooses to focus on the recovery rebate that was included in all three bills. A detailed discussion of the recovery rebate and why we chose to focus on in are provided in the next section.

C. Recovery Rebate

There was significant debate in Congress about how best to provide financial relief to the many Americans negatively impacted by the coronavirus pandemic. Although Congress could have chosen other avenues to provide fiscal stimulus (e.g. even larger additions to UI benefits), speed was an important factor.[16] Although it is not explicitly stated anywhere, Congress likely chose to structure the stimulus as a tax rebate because the IRS is best equipped to get money directly into the hands of individuals. Additionally, there was a strong push by Congress for the fiscal stimulus to benefit as many people as possible, which excluded alternative methods of distribution such as additions to UI benefits.[17]

Two types of tax cuts were discussed as possible avenues for fiscal stimulus, a payroll tax cut and a lump-sum tax rebate. Congress has used both types of tax cuts in past periods of economic weakness. In 2011 and 2012, payroll taxes were reduced by 2 percentage points, which provided relief to any individual with earned income.[18] In the first half of 2008, individual tax relief was provided through "recovery rebates," which individuals received in the form of a rebate check in advance of filing their 2008 tax returns.[19] A comparison of payroll tax cuts and

[15] The Department of Education is able to defer payment of student loans under the authority granted to it by the HEROS Act (P.L. 108-76).

[16] The Congressional Record shows Senator Mitch McConnell stating "Obviously, the purpose of [the recovery rebate] is to provide immediate relief to folks who are facing cash flow problems in their families as they stay home to stop the spread of this virus" (Congressional Record Vol. 166, No. 53). Senator Cory Booker can be seen saying "And, God, we need to be doing it quickly, getting payments to people as soon as possible" (Congressional Record Vol. 166, No. 54).

[17] During debates on the floor of Congress Senator Cory Booker states "Economic relief packages coming from this body should be about offering everyone relief, including those who, through no fault of their own, now find themselves on that financial brink" (Congressional Record Vol. 166, No. 54).

[18] See Congressional Research Service report R41648 for additional discussion about the 2011 and 2012 payroll tax cuts.

[19] See report JCX-4-08R by the Joint Committee On Taxation for additional discussion about the 2008 rebate and other cash rebates to individuals.

lump-sum tax rebates was conducted by the Congressional Research Service (IN11234; March 11, 2020)

In this report, three characteristics were considered: speed of delivery, effectiveness of stimulus based on empirical evidence, and distributional considerations. While both a payroll tax cut and one-time rebate could be implemented quickly, the IRS was able to implement the 2008 rebate in 62 days and the 2011 payroll tax cuts within a month, the report states a payroll tax cut would likely take longer to fully deliver. This is because a payroll tax cut is paid out over an extended period of time relative to a one-time rebate.

The report cites an extensive number of empirical studies that have attempted to measure the economic effects of a payroll tax cut, a one-time rebate, and studies comparing the two. Overall, the studies suggest these policies are among the most effective tax policy options to stimulate the economy, but none of the studies provide strong evidence that, all else equal, one tax rebate is more likely to be spent than the other. The studies are able to generally conclude that allowing for refundability and targeting lower-income populations resulted in greater stimulative effects.

Finally, the report discusses the distribution considerations of each tax cut. As expected, a payroll tax cut is tier to an individual's wage earnings. Therefore, an individual who earns more would receive a larger tax cut. In contrast, a lump-sum tax rebate leads to a larger share of benefits going towards the lower part of the income distribution. A lump-sum tax rebate that is refundable can provide benefits to individuals without income tax, as well as those receiving Social Security benefits but have no earnings. Additionally, a lump-sum tax rebate can be easily phased out for higher-income taxpayers. Though there is no direct evidence, it is likely for these reasons Congress chose a lump-sum tax rebate over a payroll tax cut.

The first lump-sum tax rebate, referred to in the legislation as a "recovery rebate," was included in the CARES Act. Colloquially, the recovery rebate has also been referred to as an "economic impact payment" (EIP) as well as a stimulus payment. From this point forward, we will use the terms EIP or stimulus payment when referring to the recovery rebate.

The first stimulus payment was included in the CARES Act. This payment provided $1,200 for an individual, $2,400 for a couple filing jointly, and $500 for a qualifying dependent under age 17.[20] Income thresholds for receiving the full payment were set at $75,000 for an individual and $150,000 for couples filing jointly, and were based on the adjusted gross income (AGI) reported in 2018 or 2019 tax filings. For every $100 of adjusted gross income over the threshold the stimulus payment was reduced by $5. This means an individual with no qualifying dependents and an AGI of $99,000 or more should not receive a payment. For couples filing jointly with no qualifying dependents, the AGI at which the payment hits zero is $198,000.[21]

[20] A valid Social Security Number (SSN) or adoption taxpayer identification number (ATIN) are necessary to receive this and any future stimulus payments.

[21] In an article released by The Hill (Bolton, 2020), Republican senators are referenced saying they want to model the recovery rebate on the stimulus checks former President George W. Bush sent out during the 2008 financial crisis. The 2008 rebate had income thresholds of $75,000 for individuals and $150,000 for couples filing jointly, and were phased out at a rate of $5 for every $100 of income over the threshold.

The second stimulus payment was included in the Coronavirus Relief Act, and provided $600 for individuals, $1,200 for couples filing jointly, and $600 for a qualifying dependent under age 17. Income thresholds for receiving the full payment were again set at $75,000 for an individual and $150,000 for couples filing jointing. The stimulus payment was phased out at a rate of $5 for every $100 of AGI over the threshold. Since the stimulus payment for an individual and couple are smaller than the first payment, the income levels at which the stimulus payment will hit zero are also lower. For an individual with no qualifying dependents and an AGI of $87,000 or more should not receive a payment. A couple filing jointly with no qualifying dependents will not receive a stimulus payment if they have an AGI of $174,000 or more.

The third and, as of writing this paper, final stimulus payment was included in the American Rescue Plan Act. The stimulus payment was raised to $1,400 for an individual, $2,800 for couples filing jointly, and $1,400 per qualifying dependent. This Act also made two major changes to the eligibility requirements. The first was an expansion of the type of dependents who qualified for the payment. Under the new legislation children under age 19, under age 24 if a student, or considered "permanently and totally disabled" qualify to receive a stimulus payment. Additionally, an adult who makes less than $4,300, excluding Social Security benefits and tax-exempt income, and receives at least half their total support from the taxpayer claiming their dependency qualify to receive a stimulus payment.

The second major change was to the phase out schedule. The first two stimulus payments were phased out at a rate of $5 for every $100 of AGI over the income thresholds. For the third stimulus payment the AGI thresholds below which the full stimulus is received are kept the same, $75,000 for an individual and $150,000 for a couple filing jointly. The difference is the income threshold at which no stimulus payment is received. Rather than the threshold depending on tax filing status and number of dependents, the AGI is held fixed at an AGI of $80,000 for an individual and $160,000 for a couple filing jointly. Since the "zero payment" threshold is now fixed this means the rate at which the stimulus payment is phased out will depend on the tax filing status and number of dependents. Figure 5 through Figure ***7*** in the Appendix show how all three rebates phase out as income increases for different household compositions.

Because of its use during previous times of economic hardship, lump-sum tax rebates were looked to as a way to generate fiscal stimulus. However, consumer spending is strongly correlated with their sense of well-being, and will vary based on the economic environment they face. The environment in which we are experiencing the current economic crisis is substantially different for the environment we faced when dealing with the 2001 and 2008 recessions. Individuals' sense of well-being is different than during the previous recessions. As a result, the ability of the rebates to stimulus the economy will be different. The connection between a consumer's sense of well-being and their use of the stimulus payment has yet to be explored. This paper intends to fill the gap within the literature by analyzing data from the Household Pulse Survey to determine what effect self-reported measures of well-being have on the reported use of the stimulus payment.

U.S. Household Pulse Survey

The purpose of this section is to provide details about the Household Pulse Survey (HPS) and the data we will be using. The first subsection provides general details about the HPS. The next subsection presents a brief discussion about how some of the EIP questions were recoded and some summary statistics. The final subsection discusses the validity of the data.

A. Background

The Bureau of Labor Statistics (BLS), along with several other federal agencies, developed questions for the rapid-response HPS. The HPS, an online survey using a probability-based sample and email and text message invitations to elicit responses from participants, is a collaboration among the U.S. Census Bureau, BLS, the U.S. Bureau of Transportation Statistics, the Centers for Disease Control and Prevention, the U.S. Department of Housing and Urban Development, the National Center for Education Statistics, the National Center for Health Statistics, the Social Security Administration, and the Economic Research Service of the U.S. Department of Agriculture. The survey was developed for a quick release in the field, gathering data on the many ways in which the lives of people in the United States have been affected by the pandemic. The survey instruments include questions on respondent demographics, employment, food security, health, housing, education, financial well-being, and spending behaviors.[22]

As of April 15, 2021, data for the first three phases of the survey have been released.[23] The first phase of the survey was fielded from April 23 to July 21, 2020. The Bureau of Labor Statistics (BLS) contributed questions related to the receipt and actual or expected use of the economic impact payments (EIP), as well as sources of income being used to meet spending needs during the pandemic.[24,25] The second phase of the survey was fielded from August 19 to October 26, 2020, BLS questions shifted focus from the economic stimulus payments to the financial well-being of respondents and the potential long-term impacts of the coronavirus pandemic and related policies or changes in business practices that influence consumer buying behavior.[26] The third phase of the survey was fielded from October 28, 2020 to March 29, 2021. During this phase, BLS questions on financial well-being and consumer buying behaviors were continued. Starting Week 22 of the survey (January 6 to January 18, 2021) the questions about receipt and use of the EIP were added back into the survey in response to the passing of the Coronavirus Relief Act.[27] It should be noted that the EIP receipt and use questions during the third phase are primarily in reference to the second stimulus payment; however, responses during the final

[22] For more information about the Household Pulse Survey, see "Household Pulse Survey: measuring social and economic impacts during the coronavirus pandemic" (U.S. Census Bureau), https://www.census.gov/programs-surveys/household-pulse-survey.html

[23] Funding for Phase 3.1 has been acquired and is scheduled to being on April 14, 2021, with the next data release on May 5, 2021.

[24] See Garner et al (2020a) for a brief analysis of the data from the first phase and reported receipt and use of the stimulus payment.

[25] The BLS Office of Employment and Unemployment Statistics also contributed questions related to employment.

[26] See Garner et al (2020b) for a brief analysis of data from the second phase and how individuals reported changing their purchasing behavior in response to the coronavirus pandemic.

[27] See the Appendix for a list of the questions included in our analysis.

week of the third phase (Match 17-29) likely include answers in reference to the third stimulus payment.[28] We are unable to identify which stimulus payment respondents are referencing in their answers, but the week fixed effects that we include in our models should capture any differences between the second and third stimulus payments. The present analysis only uses data from the third phase of the survey.

This paper focuses on the interaction between self-reported measures of well-being and reported use of the EIP. While the first phase of the survey includes questions about the stimulus payments, it only includes a limited set of questions about well-being. The second phase of the survey includes an expanded set of well-being questions, but does not include questions about receipt and use of the EIP. Only the third phase of the survey, starting on January 6, 2021, includes both the expanded set of well-being questions and questions about the receipt and use of the EIP. Additionally, the wording for the receipt and use of the EIP question changes between the first and third phases. The first and third phases of the question are presented below.

> *Phase 1* - Q15. If you, or anyone in your household, already received, or plan to receive a "stimulus payment," that is the coronavirus related Economic Impact Payment from the Federal Government, did or will you use it: Select only one answer
>
> - Mostly to pay for expenses (food, clothing, shelter, etc) (1)
> - Mostly to pay off debt (car loans, student loans, credit cards) (2)
> - Mostly to add to savings (3)
> - Did not and do not expect to receive the stimulus payment (4)
>
> *Phase 3* - Q15. In the last 7 days, if you or anyone in your household received a "stimulus payment," that is a coronavirus related Economic Impact Payment from the Federal Government, did you: Select only one answer
>
> - Mostly spend it (1)
> - Mostly use it to pay off debt (2)
> - Mostly save it (3)
> - Not applicable, I did not receive the stimulus payment (4)

The two primary changes of note are the change in reference period and dropping of examples with the question answers.[29] During the first phase of the survey, respondents were asked if they "received or plan to receive" a stimulus payment, which allowed for the responses to include actual as well as expected use. In contrast, the reference period of the question during

[28] The third stimulus payment began to be distributed on March 12, 2021 (https://www.irs.gov/coronavirus/third-economic-impact-payment). Distribution of all three economic impact payments can be approximated from the U.S. Bureau of Economic Analysis' personal consumption expenditure tables released in December 2020 and March 2021.

[29] It should also be noted that the answer choices were presented in a different order during the third phase. "Mostly save it" was presented as the second option and "mostly use it to pay off debt" was presented as the third option. We kept the answer order the same across the two phases in the paper for ease of comparison.

the third phase is restricted to "the last 7 days." Therefore, answers to this version of the question will only include actual use of the stimulus payment.

With respect to the answer choices, the version of the question using during the first phase included examples for each option whereas the version used during the third phase does not. Although this seems like a subtle difference, it has significant implication for the results. During the first phase of the survey "shelter," which includes rent and mortgage payments, were explicitly included in "expenses". Since the third phase did not provide examples, it was up to respondents to decide how to classify expenses. In particular, respondents could potentially classify a mortgage payment as "paying off debt" rather than "spending it."[30] For these reasons, we focus on data collected during the third phase of the survey.

B. Recording and Summary Statistics

The analysis presented in this paper focuses on the reported use of the economic impact payments in the previous 7 days, which is measured by Q15 and Q19 of the Household Pulse Survey (HPS). The question wording for Q15 used during the third phase was provided in the previous section. Answers to Q15 are used to determine receipt of the EIP. Table 2 shows how Q15 was recoded to a binary variable with 1 representing receipt and 0 otherwise.

Table 2: Q15 Recoding

	EIP Received (1)	EIP NOT Received (0)
Answers to Q15	Mostly spend it Mostly use to pay off debt Mostly save it	Not applicable, I did not receive the stimulus payment

Respondents who reported receiving a stimulus payment in the previous 7 days were also asked to select how they spent their stimulus payment from a detailed list of categories. The specific question wording and options are provided below.

> Q19. What did you and your household mostly spend the most recent "stimulus payment" on? Select all that apply.
>
> - Food (groceries, eating out, take out) (1)
> - Clothing (clothing, accessories, shoes) (2)
> - Household supplies and personal care products (3)
> - Household items (TV, electronics, furniture, appliances) (4)
> - Recreational goods (sports and fitness equipment, bicycles, toys, games) (5)
> - Rent (6)
> - Mortgage (scheduled or monthly) (7)

[30] See the Appendix for more details about the difference between reported use during the first and third phases, as well as an argument for how respondents classified mortgage payments could explain a portion of this difference.

- Utilities and telecommunications (natural gas, electricity, cable, internet, cellphone) (8)
- Vehicle payments (scheduled or monthly) (9)
- Paying down credit card, student loans, or other debts (10)
- Charitable donations or giving to family members (11)
- Savings or investments (12)
- Other (13)

Research on previous stimulus payments provide a more detailed analysis stimulus payment spending behavior by estimating the marginal propensity to consume (MPC). Without data on specific dollar amounts we are unable follow this previous research and estimate a traditional MPC. However, we can use the results from Q19 to estimate the "marginal propensity to click." This "MPC" can be interpreted of as a measure of a respondent's spending diversity. First, we divided "spending" into three categories: spending on nondurables, spending on other, and spending on goods and services, which just combines spending on nondurables with spending on other. Then we count the number of items within each category the respondent reported. Table 3 shows how the choices for Q19 are recoded.

Table 3: Q19 Recoding

	Spending on Nondurables	Spending on Other	Spending on Goods and Services
Answers to Q19	Food Clothing Household supplies and personal care products Utilities and telecommunications	Household items Recreational goods Rent Mortgage Vehicle payments Other	Food Clothing Household supplies and personal care products Household items Recreational goods Rent Mortgage Utilities and telecommunications Vehicle payments Other

Note "paying down credit cards, student loans, or other debts", "charitable donations or giving to family members", and "savings or investments" are not included in the recoding. To make our "MPC" most directly comparable with other research we focus on categories that respondents would categorize as "spending". "Paying down credit cards, student loans, or other debts" is most likely to be categorized as "debt"; "savings or investments" is most likely to be categorized as "savings"; and we are unsure how respondents would categorize "charitable donations or giving to family members," so we do not include it as "spending". For completeness, we will also provide a similar analysis for these three variables.

Summary statistics Q15 and Q19 can be found in Table 4. About 54% of respondents during January 6 through March 29, 2021 reported receiving an economic impact payment in the previous 7 days. Table 11 in the Appendix shows how this percentage changes from week to week. With respect to reported use of the stimulus payment, 13% of respondents reported "mostly spent it", 27% reported "mostly used to pay off debt," and 13% reported "most save

it." These percentages translate to about 24.5% of respondents who reported receiving the stimulus payment in the previous 7 days answered "mostly spend it," about 50.8% answered "mostly used to pay off debt," and about 24.7% reported "mostly save it."[31] Again, the frequency across weeks for these categories can be found in Table 11.

Table 4: EIP Question

	N[a]	Mean	Min	Max	Median
Q15 (In the past 7 days)					
Receipt of EIP	441,658	0.541	0	1	1
Mostly spent it	441,658	0.132	0	1	0
Most used to pay off debt	441,658	0.275	0	1	0
Mostly save it	441,658	0.134	0	1	0
Q19					
Spending on Nondurables	213,811	1.361	0	4	1
Spending on Other	213,811	0.730	0	6	1
Spending on Goods and Services	213,811	2.091	0	10	2
Paying down credit cards	213,811	0.324	0	1	0
Savings or Investments	213,811	0.181	0	1	0
Charitable Donations	213,811	0.041	0	1	0

[a] The number of observations for Q19 is lower than Q15 because Q15 includes "Did not receive" (223,185 obs) and some respondents did not answer Q19 (4,662 obs).

Table 4 also reports the average number of spending categories respondents selected for nondurables, other spending, and all goods and services. On average, respondents selected 1.36 nondurable categories and 0.73 other spending categories, which means 2.09 goods and services categories were selected on average. The maximum number of nondurable and other spending categories was 4 and 6, respectively. Although there were some respondents who reported using the stimulus payment for quite a few of the categories, a plurality of respondents reported using the stimulus for only one or two of the spending categories.[32] We

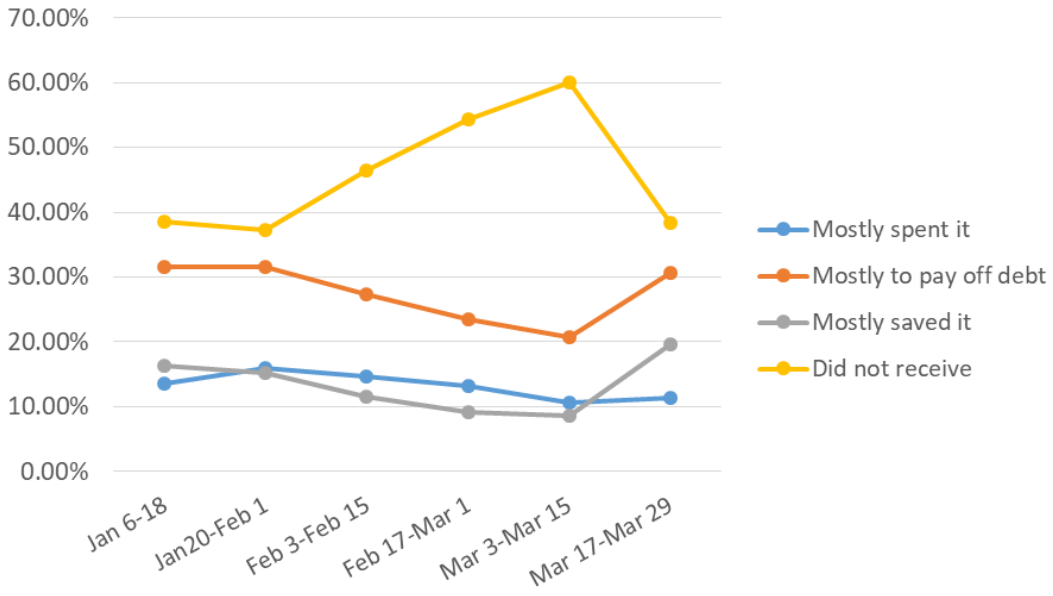
[31] The percentage of respondents who reported using the stimulus payment for debt is similar to what Sahm et al. (2020) find with data from the University of Michigan Survey of Consumers. However, these results stand in contrast with those found using the CEQ (See Table 10 in the Appendix) and phase one of the HPS. Over 50% of respondents in the CEQ report using the stimulus payment, in the previous three months, "mostly for expenses." Respondents to the CEQ are ``trained" to consider certain items, such as mortgage and vehicle payments, spending, unlike in the University of Michigan survey and unlike the HPS phase three, which could explain the differences in reported use. The types of spending respondents consider for "expenses" versus "debt" could also explain the difference between responses to Q15 in phase one and phase three of the HPS. During phase one of the HPS Q15 responses included explicit examples that categorized shelter, which could include mortgage payment, as an "expense" whereas Q15 in phase three included no such examples. See Garner et al. (2021) for a bring comparison of the phase one and three HPS data. Garner et al. have forthcoming work providing a more in depth comparison of the phase one and three HPS data.

[32] A possible explanation for the low diversity of spending could be a result of the maximum amount of the second stimulus payment ($600).

Table ***12*** and Table ***13*** in the Appendix presents the same analysis using HPS data from June and July 2020, which will reflect receipt and use of the larger, first stimulus payment ($1,200). The average number of nondurable and other spending categories selected are 1.89 and 0.89, respectively, which are slightly higher than what is observed

can also see from Table 4 that about 32% of respondents reported using at least a portion of the stimulus payment to pay down debts, about 18% reported using a portion for savings or investments, and about 4% reported using a portion for charitable donations. The frequencies for Q15 from Jan 6 to March 29, 2021 are shown in Figure 1 andFigure ***2***. Figure 2 shows the response rates not including respondents who reported "did not receive." Figure 3 shows the proportion of respondents for the counts of spending on nondurables and other wi thout respondents who had a value of 0.

Figure 1: Reported EIP Use in the Past 7 Days (Q15) All Responses



for the second stimulus payment. One counter argument that could be made is that we do not see a large uptick in the number of spending categories selected during the final week of the third phase, which could include responses in reference to the third stimulus payment ($1,400). However, we are unable to tell how many, if any, of the responses during this final week are with respect to the second stimulus payment and how many are with respect to the third stimulus payment.

Figure 2: Reported EIP Use in the Past 7 Days (Q15) without Did Not Receive

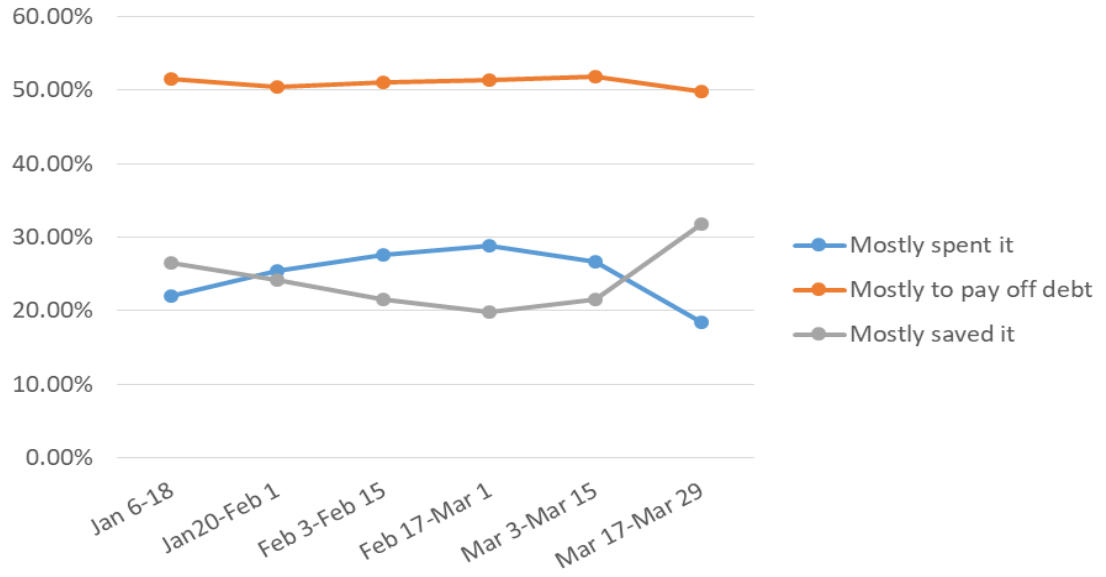


Figure 3: Spending Count (Q19) Frequencies without 0 Values

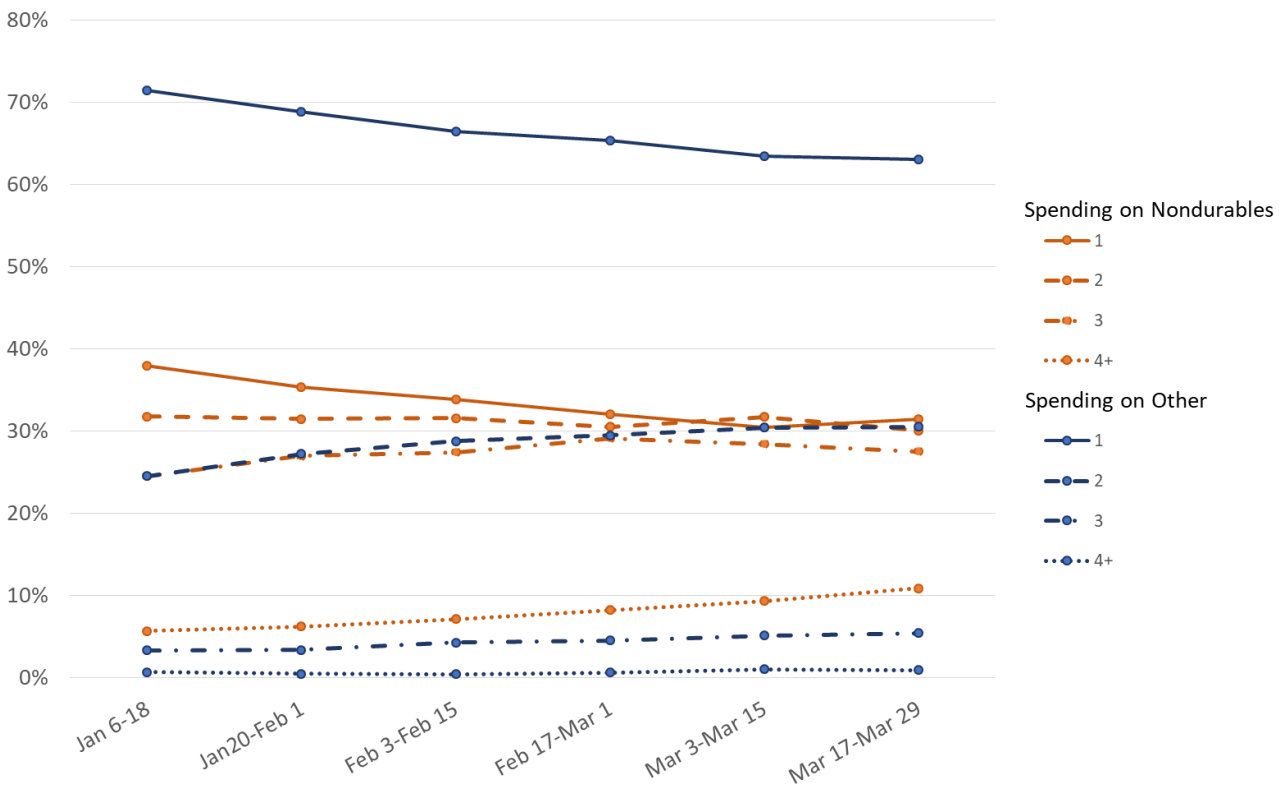


Table 13 provides summary statistics for some general demographic variables. Since the analysis of this paper is with respect to Q15 and Q19 (EIP Use) from the HPS, the summary statistics presented in Table 6 are for only those respondents who answered Q15.[33] The third

[33] Q19 was only asked if a respondent indicated if they received a stimulus payment in the previous 7 days when answering Q15. Therefore, anyone who did not answer Q15 also did not answer Q19.

phase of the survey had 732,331 total respondents, but only 441,658 answered Q15. Of these the respondents who answered Q15, 35.6% are Millennials, 25.8% are from Generation X, 31.9% are Baby Boomers, and 6.6% are from the Silent Generation. About 66% of the respondents are white, non-Hispanic and 11.5% are black, non-Hispanic. About 92% of respondents reported having at least a high school or equivalent (e.g. GED) level of education. 57.5% of respondents reported being married or widowed, and about 68% of respondents reported owning a home either with or without a mortgage. Additionally, respondents reported, on average, their household included 2.12 adults, and 0.66 children.

C. Data Validity

To determine the external validity of the HPS data we analyze where or not results of a probit regression on receipt of the EIP in the previous 7 days (Q15) are in line the eligibility criteria for receiving the EIP laid out in the Coronavirus Relief Act. To recall, an individual will receive the full payment if they have an adjusted gross income (AGI) of $75,000 ($150,000 for couples filing jointly) or less, and will have the payment reduced by $5 for every $100 of AGI over the threshold. Any dependents under age 17 qualify for an additional $600 per dependent. Additionally, anyone receiving a payment must have a valid social security number (SSN).

Whether or not a payment is received is not dependent on when the respondent is interviewed; however since the reference period for receipt of the EIP is "in the past 7 days," it is likely the case that respondents interviewed later are less likely to report receiving a payment. The Internal Revenue Service (IRS) distributed payments by sending out direct deposits first followed by paper checks. Paper checks were sent out according to income level, with lower income households receiving their payment before households with higher income. Additionally, on Feb 16, 2021 the IRS announced that it had finished sending the first and second round of stimulus payments (IR-2021-38). In order to control for when respondents were interviewed relative to the distribution of the stimulus payments, we include week fixed effects. We also include other demographic variables such as race, sex, and housing tenure.

The marginal effects of the probit regression with receipt of the EIP as the dependent variable are displayed in Support for the validity of the HPS data can also be found by comparing models (3) and (4). The model presented in column (4) controls for the number of confirmed cases of COVID-19 per 100,000 people within a state. By controlling for the number of COVID-19 cases we can test whether respondents from states with more confirmed cases of COVID-19 have a higher or lower likelihood of receiving a stimulus payment. The marginal effect of the number of COVID-19 cases within a state is statistically insignificant. This result implies that respondents from states with more COVID-19 cases are not any more or less likely to receive the stimulus payment than respondents from states with fewer cases of COVID-19, which is what we expect. None of the eligibility criteria directly depended on the prevalence of COVID-19 within the recipient's state.

In addition to not depending on the prevalence of COVID-19, the eligibility criteria do not directly depend on any objective or subjective measures of well-being. To test whether this lack of dependency is reflected in the HPS data we estimate model (5), which includes objective and subjective measures of well-being asked about during the survey. The objective measures of

well-being include employment status (employed versus unemployed), employment sector (government, private sector, non-profit, and self-employed or family business), sources of income (regular sources of income, credit cards, savings, borrowing for friends/family, UI benefits, money from deferred payments, and SNAP benefits), and whether last month's rent/mortgage payment was late. The subjective measures of well-being include whether or not the household expects someone within it to loose employment, whether or not the household has found it difficult to pay for expenditures, changing buying behavior because of concerns about the economy, food insufficiency, depression, anxiety, delayed medical treatment, unconfident about being able to pay next month's rent/mortgage, whether next month's rent/mortgage payment was deferred, and worry about being evicted or foreclosed on. Comparing models (3) and (5) shows the coefficients are not significantly impacted by the inclusion of well-being measures. This result supports our conjecture that the HPS data is measuring receipt of the EIP in line with what we would expect based on the eligibility criteria.

Focusing in on model (3), the marginal effects provide further support for our conjecture. First, as the respondent's reported level of income increases the likelihood of receiving a stimulus payment decreases, relative to respondents with incomes less than $25,000. The stimulus payments are designed in such a way that as income increases past the specified thresholds the amount received will be phased out and will eventually be $0. Albeit the exact level of income at which the stimulus payment is completely phased out will depend on tax filing status and the number of qualifying dependents, it is expected the individuals with higher incomes will be less likely to receive a payment, which is what the HPS data shows.

According to the eligibility requirements marital status should also be a determinant the probability of receipt. The income threshold for an individual is $75,000 and the stimulus payment is completely phased out at $99,000, assuming no dependents. For couples filing jointly the income threshold is $150,000 and the payment is completely phased out at $198,000. The thresholds for couples are double that of a single tax filer, and if the incomes of couples was, on average, double that of individuals then marital status would not influence the likelihood of receiving a stimulus payment. But couples filing jointly do not typically have income twice that of a single tax filer. Since the threshold is higher and incomes are relatively lower, we expect respondents who report being married are more likely to receive a stimulus payment. The results of model (3) are in line with this inference. The marginal effect of being married is positive and statistically significant.

We can also deduce from the eligibility criteria the number of kids as well as the number of adults will increase probability a stimulus payment is received. While we are not able to discern which adults and children qualify for the stimulus payment, in general having more of either in the household will lead to being eligible for a larger stimulus payment. Increasing the amount of stimulus payment a household is eligible for increases the income at which the payment completely phases out. Therefore, holding income fixed, increasing the number of adults and/or children in the household makes a household more likely to receive a stimulus payment. The coefficients on the variables for number of adults and kids are all positive, increasing in magnitude as the number of adults/kids increases, and statistically significant, which is in line with our expectation.

The marginal effects related to the period during which the respondent is interviewed also fall in line with our expectations. Based on the argument presented earlier in this section, respondents interviewed later should be less likely to receive a stimulus payment. The marginal effects of the week fixed effects are negative, increasing in magnitude, and statistically significant. That is however, until March 17 – 29. The probability a respondent receives a stimulus during this period is not statistically different from a respondent receiving a payment during Jan 6 – 18. This result suggests respondents interviewed during the last period of the third phase are reporting answers with respect to the third stimulus payment, since the IRS did not send any new payments out after Feb 17, 2021. In order to account for the possibility that results during the last week reflect the third, rather than second stimulus payment, we will make sure to include week fixed effects in the analysis presented later.

We also include a few other demographic controls including race and whether or not a respondent is female. None of these variables are explicitly referenced in any of the eligibility criteria. Nonetheless, the results in column (3) clearly show these variables have a statistically significant effect on the probability of receiving a stimulus payment. While this result could be used as an argument against the validity of the data, we believe that there is a possible explanation. We control for most of the explicit eligibility criteria including income, number of adults/kids, and whether the household is married or not. However, we do not control for whether or not a respondent is able to file their taxes as "head of household."

The income threshold for someone who files their taxes as "head of household" is higher than someone who files as "single," $112,500 versus $75,000. Since we do not control for this tax filing status any demographic characteristics that correlate with someone who files as "head of household", such as the race and female variables, could show up as statistically significant. Moreover, if a particular demographic characteristic is positively correlated with filing as "head of household" and having this tax filing status has a higher income threshold than someone filing as "single" we would expect respondents with the characteristic would have a higher

Table *5*. All variables can be interpreted as factor variables with the reference category identified at the top of the group. The model presented in column (3) is our preferred specification. The models presented in the other columns are included as additional validity checks. Comparing the first three specifications shows that controlling for respondent location does not have a statistically significant effect on the results. The model presented in column (1) does not control for location. Whereas, the models presented in columns (2) and (3) include state and metropolitan statistical area (MSA) fixed effects, respectively. The inclusion of location fixed effects does not have a statistically significant effect on the results, which implies the location of the respondent has no effect on the likelihood a respondent will be received. Since eligibility for receiving the stimulus payment did not include any geographic criteria finding that location fixed effects are insignificant supports the validity of the HPS data.

Support for the validity of the HPS data can also be found by comparing models (3) and (4). The model presented in column (4) controls for the number of confirmed cases of COVID-19 per 100,000 people within a state.[34] By controlling for the number of COVID-19 cases we can test whether respondents from states with more confirmed cases of COVID-19 have a higher or lower likelihood of receiving a stimulus payment. The marginal effect of the number of COVID-19 cases within a state is statistically insignificant. This result implies that respondents from states with more COVID-19 cases are not any more or less likely to receive the stimulus payment than respondents from states with fewer cases of COVID-19, which is what we expect. None of the eligibility criteria directly depended on the prevalence of COVID-19 within the recipient's state.

In addition to not depending on the prevalence of COVID-19, the eligibility criteria do not directly depend on any objective or subjective measures of well-being. To test whether this lack of dependency is reflected in the HPS data we estimate model (5), which includes objective and subjective measures of well-being asked about during the survey.[35] The objective measures of well-being include employment status (employed versus unemployed), employment sector (government, private sector, non-profit, and self-employed or family business), sources of income (regular sources of income, credit cards, savings, borrowing for friends/family, UI benefits, money from deferred payments, and SNAP benefits), and whether last month's rent/mortgage payment was late. The subjective measures of well-being include whether or not the household expects someone within it to loose employment, whether or not the household has found it difficult to pay for expenditures, changing buying behavior because of concerns about the economy, food insufficiency, depression, anxiety, delayed medical treatment, unconfident about being able to pay next month's rent/mortgage, whether next month's rent/mortgage payment was deferred, and worry about being evicted or foreclosed on. Comparing models (3) and (5) shows the coefficients are not significantly impacted by the inclusion of well-being measures. This result supports our conjecture that the HPS data is measuring receipt of the EIP in line with what we would expect based on the eligibility criteria.

[34] Data on the number of confirmed cases of COVID-19 were collected from the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (Dong et al. 2020).
[35] We also estimate the model with only objective measures of well-being and only subjective measures of well-being. The results are robust to these alternate specifications.

Focusing in on model (3), the marginal effects provide further support for our conjecture. First, as the respondent's reported level of income increases the likelihood of receiving a stimulus payment decreases, relative to respondents with incomes less than $25,000.[36] The stimulus payments are designed in such a way that as income increases past the specified thresholds the amount received will be phased out and will eventually be $0. Albeit the exact level of income at which the stimulus payment is completely phased out will depend on tax filing status and the number of qualifying dependents, it is expected the individuals with higher incomes will be less likely to receive a payment, which is what the HPS data shows.

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We can also deduce from the eligibility criteria the number of kids as well as the number of adults will increase probability a stimulus payment is received. While we are not able to discern which adults and children qualify for the stimulus payment, in general having more of either in the household will lead to being eligible for a larger stimulus payment. Increasing the amount of stimulus payment a household is eligible for increases the income at which the payment completely phases out. Therefore, holding income fixed, increasing the number of adults and/or children in the household makes a household more likely to receive a stimulus payment. The coefficients on the variables for number of adults and kids are all positive, increasing in magnitude as the number of adults/kids increases, and statistically significant, which is in line with our expectation.

The marginal effects related to the period during which the respondent is interviewed also fall in line with our expectations. Based on the argument presented earlier in this section, respondents interviewed later should be less likely to receive a stimulus payment. The marginal effects of the week fixed effects are negative, increasing in magnitude, and statistically

[36] Respondents with incomes between $25,000 and $75,000 are actually more likely to receive a stimulus payment than a respondent with income less than $25,000. Since anyone with an income under $75,000 receives the full payment we would expect the marginal effect of having an income within this range, relative to someone with income less than $25,000, would be statistically insignificant. However, for the stimulus payment to be received taxes must have been filed for 2018 or 2019. If no taxes had to be filed, which is more likely when income is below $25,000, an individual would need to submit their relevant information via the IRS' non-filer tool. Requiring this extra step maybe the reason individuals with income less than $25,000 may be less likely to receive a payment than other individuals with incomes less than $75,000.

[37] The median income level for respondents who reported never being married is $50,000-$74,999. The median income level for respondents who reported being married or widowed is $75,000-$99,999.

significant. That is however, until March 17 – 29. The probability a respondent receives a stimulus during this period is not statistically different from a respondent receiving a payment during Jan 6 – 18. This result suggests respondents interviewed during the last period of the third phase are reporting answers with respect to the third stimulus payment, since the IRS did not send any new payments out after Feb 17, 2021. In order to account for the possibility that results during the last week reflect the third, rather than second stimulus payment, we will make sure to include week fixed effects in the analysis presented later.

We also include a few other demographic controls including race and whether or not a respondent is female. None of these variables are explicitly referenced in any of the eligibility criteria. Nonetheless, the results in column (3) clearly show these variables have a statistically significant effect on the probability of receiving a stimulus payment. While this result could be used as an argument against the validity of the data, we believe that there is a possible explanation. We control for most of the explicit eligibility criteria including income, number of adults/kids, and whether the household is married or not. However, we do not control for whether or not a respondent is able to file their taxes as "head of household."

The income threshold for someone who files their taxes as "head of household" is higher than someone who files as "single," $112,500 versus $75,000. Since we do not control for this tax filing status any demographic characteristics that correlate with someone who files as "head of household", such as the race and female variables, could show up as statistically significant.[38] Moreover, if a particular demographic characteristic is positively correlated with filing as "head of household" and having this tax filing status has a higher income threshold than someone filing as "single" we would expect respondents with the characteristic would have a higher

[38] According to the 2019 CPS, about 18% of households with children were headed by females compared to the about 8% headed by males. Additionally, about 50% of black and about 30% of Hispanic households with children are single parent homes as compared to the about 19% of while households with children.

Table 5: Receipt of EIP in the Past 7 Days (Q15)

Dependent Variable: EIP Received (1)	(1)	(2)	(3)	(4)	(5)
Income (Ref = Less than $25,000)					
$25,000 - $34,999	0.044*** (0.007)	0.044*** (0.007)	0.044*** (0.007)	0.044*** (0.007)	0.030*** (0.007)
$35,000 - $49,999	0.060*** (0.007)	0.060*** (0.007)	0.061*** (0.007)	0.061*** (0.007)	0.040*** (0.007)
$50,000 - $74,999	0.051*** (0.006)	0.050*** (0.006)	0.052*** (0.006)	0.052*** (0.006)	0.026*** (0.007)
$75,000 - $99,999	-0.001 (0.0067)	-0.001 (0.0067)	0.000 (0.007)	0.000 (0.007)	-0.027*** (0.007)
$100,000 - $149,999	-0.064*** (0.007)	-0.063*** (0.007)	-0.062*** (0.007)	-0.062*** (0.007)	-0.093*** (0.007)
$150,000 - $199,999	-0.231*** (0.008)	-0.229*** (0.008)	-0.228*** (0.008)	-0.228*** (0.008)	-0.256*** (0.008)
$200,000 and more	-0.457*** (0.006)	-0.455*** (0.006)	-0.454*** (0.006)	-0.454*** (0.006)	-0.476*** (0.007)
Marital Status (Ref = Never married)					
Married or widowed	0.031*** (0.005)	0.031*** (0.005)	0.030*** (0.005)	0.030*** (0.005)	0.034*** (0.005)
Divorced or separated	0.013* (0.006)	0.013* (0.006)	0.012* (0.006)	0.012* (0.006)	0.014* (0.006)
# of adults (Ref = 1 adult)					
2	0.056*** (0.005)	0.056*** (0.005)	0.056*** (0.005)	0.056*** (0.005)	0.057*** (0.005)
3	0.066*** (0.006)	0.067*** (0.006)	0.066*** (0.006)	0.066*** (0.006)	0.067*** (0.006)
4+	0.088*** (0.007)	0.090*** (0.007)	0.089*** (0.007)	0.089*** (0.007)	0.089*** (0.007)
# of children (Ref = 0 children)					
1	0.030*** (0.005)	0.029*** (0.005)	0.029*** (0.005)	0.029*** (0.005)	0.030*** (0.005)
2	0.044*** (0.006)	0.043*** (0.006)	0.043*** (0.006)	0.043*** (0.006)	0.044*** (0.006)
3	0.031*** (0.008)	0.030*** (0.008)	0.030*** (0.008)	0.030*** (0.008)	0.038*** (0.008)
4+	0.048*** (0.012)	0.047*** (0.012)	0.048*** (0.012)	0.048*** (0.012)	0.054*** (0.012)
Generation (Ref = Millennial)					
Generation X	-0.045*** (0.004)	-0.045*** (0.004)	-0.045*** (0.004)	-0.045*** (0.004)	-0.046*** (0.004)
Baby Boomer	-0.092*** (0.005)	-0.092*** (0.005)	-0.092*** (0.005)	-0.092*** (0.005)	-0.076*** (0.005)
Silent Generation	-0.146*** (0.008)	-0.144*** (0.008)	-0.144*** (0.008)	-0.144*** (0.008)	-0.108*** (0.008)
Race (Ref = White, non-Hispanic)					
Black, non-Hispanic	0.020***	0.025***	0.022***	0.022***	0.023***

	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Asian, non-Hispanic	0.045***	0.050***	0.050***	0.050***	0.049***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Hispanic	0.026***	0.029***	0.029***	0.029***	0.029***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Other, non-Hispanic	-0.004	-0.002	-0.002	-0.002	0.001
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Education (Ref = Graduate degree)					
Less than high school	-0.015	-0.015	-0.015	-0.015	0.011
	(0.011)	(0.010)	(0.011)	(0.011)	(0.011)
High school or some college	0.026***	0.025***	0.025***	0.025***	0.034***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Associate's or Bachelor's	0.035***	0.035***	0.035***	0.035***	0.037***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Tenure (Ref = Owner w/ mort)					
Owner w/o mortgage	0.022***	0.023***	0.023***	0.020***	0.015***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Renter	0.008	0.010*	0.009	0.008	0.009
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Renter, no pay	-0.010	-0.008	-0.009	-0.011	-0.010
	(0.014)	(0.014)	(0.014)	(0.016)	(0.014)
Female	0.012***	0.012***	0.012***	0.012***	0.0084**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
COVID-19 cases per 100k				0.0000	
				(0.0000)	
Week (Ref = Jan 6 - 18)					
Jan 20 - Feb 1	0.010	0.010	0.010	0.010	0.010
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Feb 3 - 15	-0.087***	-0.087***	-0.087***	-0.087***	-0.087***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Feb 17 - Mar 1	-0.168***	-0.168***	-0.168***	-0.168***	-0.168***
	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)
Mar 3 - 15	-0.229***	-0.229***	-0.229***	-0.229***	-0.231***
	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)
Mar 17 - 29	-0.006	-0.006	-0.006	-0.006	-0.007
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
State FE	No	Yes	No	No	No
MSA FE	No	No	Yes	Yes	Yes
Objective Measures of Well-being [a]	No	No	No	No	Yes
Subjective Measures of Well-being [b]	No	No	No	No	Yes
N	348,051	348,051	348,051	348,051	329,732

Standard errors reported in parentheses. * p < 0.05 ** p < 0.01 *** p < 0.001

[a] Objective measures of well-being include employment status (employed versus unemployed), employment sector (government, private sector, non-profit, and self-employed or family business), sources of income (regular sources of income, credit cards, savings, borrowing for friends/family, UI benefits, money from deferred payments, and SNAP benefits), and whether last month's rent/mortgage payment was late.

[b] Subjective measures of well-being include whether or not the household expects someone within it to loose employment, whether or not the household has found it difficult to pay for expenditures, changing buying behavior because of concerns about the economy, food insufficiency, depression, anxiety, delayed medical treatment, unconfident about being able to pay next month's rent/mortgage, whether next month's rent/mortgage payment was deferred, and worry about being evicted or foreclosed on.

likelihood of receiving a stimulus payment. Bias from other omitted variables related to the eligibility criteria could also explain why the generation, education, and tenure variables have a statistically significant effect on the probability of receiving a stimulus payment.

Overall, the results of the probit regression on the receipt of the EIP are in line with what we would expect according to the eligibility criteria. Therefore, we can conclude the HPS is accurately measuring receipt of the stimulus payment, and can be used to analyze the reported use of the stimulus payment.

Analysis of Reported EIP Use

In this section we present our analysis of the reported use of the stimulus payments as measured by the Household Pulse Survey (HPS). The first subsection presents our analysis of Q15, which asks how the respondents "mostly used" their stimulus payment in the previous 7 days. To conduct this analysis we estimate a multinomial logit model. Since receipt of the stimulus payment was non-random the results of our analysis had the potential to suffer from selection bias. We estimated a model that included the inverse mills ratio (IMR), which accounts for the probability a household receives the stimulus payment.[39] The coefficient on the IMR is insignificant for all specifications, and therefore, not presented.

[39] The IMR is calculated using the prediction selection probabilities generated by model (3) in Support for the validity of the HPS data can also be found by comparing models (3) and (4). The model presented in column (4) controls for the number of confirmed cases of COVID-19 per 100,000 people within a state. By controlling for the number of COVID-19 cases we can test whether respondents from states with more confirmed cases of COVID-19 have a higher or lower likelihood of receiving a stimulus payment. The marginal effect of the number of COVID-19 cases within a state is statistically insignificant. This result implies that respondents from states with more COVID-19 cases are not any more or less likely to receive the stimulus payment than respondents from states with fewer cases of COVID-19, which is what we expect. None of the eligibility criteria directly depended on the prevalence of COVID-19 within the recipient's state. In addition to not depending on the prevalence of COVID-19, the eligibility criteria do not directly depend on any objective or subjective measures of well-being. To test whether this lack of dependency is reflected in the HPS data we estimate model (5), which includes objective and subjective measures of well-being asked about during the survey. The objective measures of well-being include employment status (employed versus unemployed), employment sector (government, private sector, non-profit, and self-employed or family business), sources of income (regular sources of income, credit cards, savings, borrowing for friends/family, UI benefits, money from deferred payments, and SNAP benefits), and whether last month's rent/mortgage payment was late. The subjective measures of well-being include whether or not the household expects someone within it to loose employment, whether or not the household has found it difficult to pay for expenditures, changing buying behavior because of concerns about the economy, food insufficiency, depression, anxiety, delayed medical treatment, unconfident about being able to pay next month's rent/mortgage, whether next month's rent/mortgage payment was deferred, and worry about being evicted or foreclosed

on. Comparing models (3) and (5) shows the coefficients are not significantly impacted by the inclusion of well-being measures. This result supports our conjecture that the HPS data is measuring receipt of the EIP in line with what we would expect based on the eligibility criteria.

Focusing in on model (3), the marginal effects provide further support for our conjecture. First, as the respondent's reported level of income increases the likelihood of receiving a stimulus payment decreases, relative to respondents with incomes less than $25,000. The stimulus payments are designed in such a way that as income increases past the specified thresholds the amount received will be phased out and will eventually be $0. Albeit the exact level of income at which the stimulus payment is completely phased out will depend on tax filing status and the number of qualifying dependents, it is expected the individuals with higher incomes will be less likely to receive a payment, which is what the HPS data shows.

According to the eligibility requirements marital status should also be a determinant the probability of receipt. The income threshold for an individual is $75,000 and the stimulus payment is completely phased out at $99,000, assuming no dependents. For couples filing jointly the income threshold is $150,000 and the payment is completely phased out at $198,000. The thresholds for couples are double that of a single tax filer, and if the incomes of couples was, on average, double that of individuals then marital status would not influence the likelihood of receiving a stimulus payment. But couples filing jointly do not typically have income twice that of a single tax filer. Since the threshold is higher and incomes are relatively lower, we expect respondents who report being married are more likely to receive a stimulus payment. The results of model (3) are in line with this inference. The marginal effect of being married is positive and statistically significant.

We can also deduce from the eligibility criteria the number of kids as well as the number of adults will increase probability a stimulus payment is received. While we are not able to discern which adults and children qualify for the stimulus payment, in general having more of either in the household will lead to being eligible for a larger stimulus payment. Increasing the amount of stimulus payment a household is eligible for increases the income at which the payment completely phases out. Therefore, holding income fixed, increasing the number of adults and/or children in the household makes a household more likely to receive a stimulus payment. The coefficients on the variables for number of adults and kids are all positive, increasing in magnitude as the number of adults/kids increases, and statistically significant, which is in line with our expectation.

The marginal effects related to the period during which the respondent is interviewed also fall in line with our expectations. Based on the argument presented earlier in this section, respondents interviewed later should be less likely to receive a stimulus payment. The marginal effects of the week fixed effects are negative, increasing in magnitude, and statistically significant. That is however, until March 17 – 29. The probability a respondent receives a stimulus during this period is not statistically different from a respondent receiving a payment during Jan 6 – 18. This result suggests respondents interviewed during the last period of the third phase are reporting answers with respect to the third stimulus payment, since the IRS did

The next subsection presents our analysis of Q19, which asked respondents to identify all ways in which they used their stimulus payment from a list of possible options. The purpose of this question was to get a more detailed picture of how respondents were using their stimulus payment. For ease of analysis, the responses to Q19 were recoded as spending on nondurables and spending on other goods. A general spending on goods and services was also created, which is simply the sum of spending on nondurables and spending on other goods. The specific recoding of Q19 can be found in Table 3. Each variable represents the number of ways a respondent reported using their stimulus payment that were classified into the corresponding category. Analyzing the answers to Q19 in this way allows us to measure the "marginal propensity to click" on a spending category, which can be interpreted as a measure of spending diversity. The more reported uses (i.e. the more "clicks") recorded by a respondent means the stimulus payment was used in more ways.

A. How Respondents "Most" Used Their Stimulus Payment in the Past 7 Days (Q15)

The marginal effects of the multinomial logit regression on the responses to Q15 are presented in

Table ***7*** presents the OLS regression results on the level values and natural log of the spending count variables. Since these are count variables, we also present the marginal effects of a negative binomial regression model in Table 8. The regression using the natural log of spending

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not send any new payments out after Feb 17, 2021. In order to account for the possibility that results during the last week reflect the third, rather than second stimulus payment, we will make sure to include week fixed effects in the analysis presented later.

We also include a few other demographic controls including race and whether or not a respondent is female. None of these variables are explicitly referenced in any of the eligibility criteria. Nonetheless, the results in column (3) clearly show these variables have a statistically significant effect on the probability of receiving a stimulus payment. While this result could be used as an argument against the validity of the data, we believe that there is a possible explanation. We control for most of the explicit eligibility criteria including income, number of adults/kids, and whether the household is married or not. However, we do not control for whether or not a respondent is able to file their taxes as "head of household."

The income threshold for someone who files their taxes as "head of household" is higher than someone who files as "single," $112,500 versus $75,000. Since we do not control for this tax filing status any demographic characteristics that correlate with someone who files as "head of household", such as the race and female variables, could show up as statistically significant. Moreover, if a particular demographic characteristic is positively correlated with filing as "head of household" and having this tax filing status has a higher income threshold than someone filing as "single" we would expect respondents with the characteristic would have a higher

Table *5*.

count and the negative binomial produce similar results, and the marginal effects from the negative binomial model are similar to the coefficients from the regression on the levels of spending count. Each model specification is run separately for spending on nondurables, other, and all goods and services. Additionally, the observations for each model included only those respondents who reported using the stimulus for at least one of the items in the corresponding category. For example, only respondents who reported spending their stimulus payment on food, clothing, housing supplies, and/or utilities were included when the dependent variable was spending on nondurables. The respondent was included in the sample for this regression even if they did not report using the stimulus payment for any categories in spending on other; however, any respondent who did not report using the stimulus payment for any of the categories in spending on other were not included in the sample when spending on other was the dependent variable. The following discussion will focus on the results presented in

Table ***7.***

The difficulty households experienced meeting expenses has a significant effect on the diversity with which households spend their stimulus payment. As the level of difficult in meeting expenses increases, the diversity of spending also increases in both levels and percentages. This result is in line with the intuition that households with experiencing more financial difficulty are likely facing difficulty meeting expenses across more categories. Thus, if they are going to spend addition money they receive, in this case the stimulus payment, they will try to spread it across as many categories as possible.

As a check of the validity of the results, we also controlled for how respondents reported "mostly using" their stimulus check (Q15). If respondents are answering the survey accurately then if the report mostly using the stimulus for debt or savings there should be less stimulus payment remaining for spending. Thus, the number of spending categories the respondent reports should be lower. In terms of levels, shown in the columns 2 through 4 of

Table ***7,*** that is what we see. Respondents who report mostly using the stimulus for debt or savings report using the stimulus for few spending categories. This result holds when looking at the natural log, columns 5 through 7, with one important exception. Respondents who report mostly using the stimulus for debt select about 2% more categories in spending on other than respondents who report mostly using the stimulus for spending. We can explore this result a little further by analyzing the likelihood respondents selected a particular category from the list presented in Q19.

Table *6*. Two model specifications are presented. The first model includes a housing tenure variable that depends on whether or not the previous month's rent or mortgage payment is on time. The second specification uses a different measure of housing tenure that depends on how confident the household is about being able to make the next rent or mortgage payment. A third version of the model is included in the Appendix that provides regression results when the two housing tenure variables are interacted. The type of tenure variable used appears to have little effect on the marginal effects of the other variables, so we will center our discussion on model (1).

With respect to the eligibility criteria, households with higher income are more likely "mostly spend" the stimulus payment. Lower income households are more likely to report using the stimulus payment to "mostly paying off debt."[40] Married and divorced households are also more likely to report using the stimulus payment for debt and less likely to "mostly save it" compared to single households. In general, the size of the household, both with respect to the number of children and number of adults, does not appear to have a significant effect on how a household will report using the stimulus payment. However, households with four or more children are more likely to use the stimulus payment for spending and less likely to save it.

Other demographic characteristics that are not directly related to the eligibility criteria also affect how households report using the stimulus payment. Compared to Millennials, respondents in the Silent generation are less likely to use the stimulus payment mostly for debt. In contrast, respondents who are in Generation X are more likely to use the payment mostly for debt. While we do not know the motivation behind why respondents used the stimulus payment as they did, there is strong evidence to suggest it is related to the amount of debt a respondent holds. A report by Experian (Stolba 2021) finds average debt to be $78,396 for Millennials, $135,841 for Generation X, $96,984 for Baby Boomers, and $40,925 for the Silent Generation. Assuming the amount of debt is a determinant when respondents are deciding how to spend their stimulus, the average amount of debt, relative to Millennials, exactly mirror our results.

The debt burden faced by respondents may also provide insight into the marginal effects of race. Data collected by the Urban Institute (Braga et al. 2021) show the median debt in collections is higher for communities of color than for majority white communities. Additionally, a research published by Debt.org (Fay 2020) finds that debt relative to income is higher for black households and lower for Asian households than for white households. If we maintain our assumption that debt burden is a determinate of how respondents will report using the stimulus payment, our results are exactly in line with the Urban Institute data and findings by Debt.org. Black, non-Hispanic respondents are more likely to report using the stimulus payment to mostly pay off debt relative to white, non-Hispanic respondents, and Asian, non-Hispanic respondents are less like to report using the stimulus for debt.

It should be noted, the debt-to-income findings do not translate to levels. White individuals carried the highest amount of credit card debt ($7,942), followed by Asians ($7,660), and then blacks ($6,172). Thus, the debt-to-income findings are a result of average income being lowest for blacks and highest for Asians. The subtle distinction between debt level and debt-to-income ratio suggests, if debt is a determinate of how households report spending their stimulus, it is not the amount of debt, but rather the relative burden of the debt that is the motivating factor.

The Urban Institute data support this theory. Although the data shows the median debt level is higher in communities of color than in majority white communities the data reports debt in

[40] Dietrich et al. (2020) find that, relative to higher income, lower income households are less likely to spend more due to the coronavirus pandemic. Coibion et al. (2020) find the marginal propensity to pay debt using the stimulus payment decreases as household income increases. Although the models in both these papers are not directly comparable, our findings are line with what we would expect given the results found by Dietrich et al and Coibion et al.

collections, not total debt. Arguably, one can deduce households with a higher amount of debt in collections face a higher debt burden, regardless of the overall debt level.

Continuing with this theory, the level of debt burden has been shown to be negatively correlated with subjective measures of well-being (Keese 2012, Tay et al. 2017, Hiilamo 2020, and Greenberg and Mogilner 2021). If this is the case, then households with a lower sense of well-being should be more likely to use the stimulus payment for debt, which is what the data shows. Households that expect a member to loose employment as well as households that report experiencing financial difficulty are more likely to put the stimulus payment towards debt and less likely to save it.[41] Expecting to be foreclosed on or evicted within the next two months as results in households being more likely to put the stimulus payment towards debt and less likely to save it. Households that are experience food insecurity are also more likely to put the stimulus towards debt, but also more like to use the stimulus for spending. Additionally, those households who have reported delaying medical treatment due to the pandemic are more likely to use the stimulus for spending. While overall, it appears households with a lower view of their well-being put the stimulus payment towards debt, it should be noted that the way in which households believe they are suffering will influence how they spend their stimulus payment.

Our results also suggest that time, and potentially size, of the stimulus payment will also impact how the stimulus payment will be used. As the weeks progress and we get further from when the stimulus payments began being distributed (Dec 31, 2020) respondents become decreasingly likely to report using the stimulus for savings and more likely to use it for spending.[42] Timing does not appear to have any statistically significant effect on the likelihood of using the payment for debt. This result suggests households initially put the stimulus payment into savings and then spend it as needed.

Support for this theory can be found by looking at the marginal effect of being interviewed between March 17 and 29, 2021. The trend in the marginal effects seen across the previous interview periods breaks. Respondents are now much more likely to report using the stimulus payment for savings and much less like to report using the stimulus for spending. Again, there is no effect on the likelihood of using the stimulus payment for debt. This break in trend is likely due to the distribution of the third stimulus payment, which began being distributed on March 12. The third stimulus payment was significantly larger than the second ($1,400 versus $600), and while this likely had some impact on how respondents uses the stimulus, we believe the

[41] Sahm et al. (2020) look at actual, rather than expected, job loss, but also find that the reported use of savings among this group is lower.

[42] Sahm et al. (2012) analyze the 2008 tax rebates, and also find the rate of reported spending increases as we get further from when the payments were first distributed. In contrast, Baker et al. (2020c) use transaction data to determine the marginal propensity to consume (MPC) for the first stimulus payment. They find MPC spikes shortly after the stimulus payment is received and then falls in the following days. Three primary differences could explain why our results differ. First, Baker et al. are looking at the first stimulus payment, where as we are analyzing the second. Second, they only look at transactions no more than 8 days after receiving the payment, where as our respondents are likely responding several weeks after receiving the stimulus payment. Finally, they are looking at transactional data and classify accordingly where as we are relying on respondents own definitions of "spending", "debt", and "savings". The potential for subjective definitions to explain some of the results will be explored later.

break in trend can also be explained by the short time period between distribution of the payments and when the interview occurred.

B. Marginal Propensity to Click (Q19)

Table ***7*** presents the OLS regression results on the level values and natural log of the spending count variables. Since these are count variables, we also present the marginal effects of a negative binomial regression model in Table 8. The regression using the natural log of spending count and the negative binomial produce similar results, and the marginal effects from the negative binomial model are similar to the coefficients from the regression on the levels of spending count. Each model specification is run separately for spending on nondurables, other, and all goods and services. Additionally, the observations for each model included only those respondents who reported using the stimulus for at least one of the items in the corresponding category. For example, only respondents who reported spending their stimulus payment on food, clothing, housing supplies, and/or utilities were included when the dependent variable was spending on nondurables. The respondent was included in the sample for this regression even if they did not report using the stimulus payment for any categories in spending on other; however, any respondent who did not report using the stimulus payment for any of the categories in spending on other were not included in the sample when spending on other was the dependent variable. The following discussion will focus on the results presented in

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Table 6: Multinomial Logit Marginal Effects for Respondents Who Reported Receipt in Past 7 Days

Dependent Variable:	(1)			(2)		
EIP Use	Spending	Debt	Savings	Spending	Debt	Savings
Income (Ref = Less than $25,000)						
$25,000 - $34,999	-0.026**	0.027**	-0.001	-0.025**	0.026**	-0.001
	(0.009)	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)
$35,000 - $49,999	-0.018*	0.027**	-0.009	-0.017*	0.026**	-0.009
	(0.008)	(0.009)	(0.009)	(0.008)	(0.009)	(0.009)
$50,000 - $74,999	-0.003	0.020*	-0.016*	-0.003	0.020*	-0.017*
	(0.008)	(0.009)	(0.008)	(0.008)	(0.009)	(0.008)
$75,000 - $99,999	0.002	-0.004	0.002	0.002	-0.003	0.001
	(0.009)	(0.010)	(0.008)	(0.009)	(0.010)	(0.008)
$100,000 - $149,999	0.007	-0.022*	0.015	0.007	-0.021*	0.014
	(0.010)	(0.010)	(0.009)	(0.009)	(0.010)	(0.009)
$150,000 - $$199-999	0.032**	-0.044***	0.012	0.032**	-0.043***	0.011
	(0.012)	(0.013)	(0.011)	(0.012)	(0.013)	(0.011)
$200,000 and above	0.042**	-0.090***	0.047***	0.042**	-0.088***	0.046***
	(0.015)	(0.016)	(0.013)	(0.015)	(0.016)	(0.013)
Marital Status (Ref = Never married)						
Married or widowed	0.004	0.030***	-0.034***	0.004	0.030***	-0.034***
	(0.006)	(0.007)	(0.006)	(0.006)	(0.007)	(0.006)
Divorced or separated	0.005	0.051***	-0.056***	0.005	0.051***	-0.056***
	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)
# of adults (Ref = 1 adult)						
2	0.002	0.003	-0.005	0.002	0.003	-0.005
	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)	(0.005)
3	0.005	0.007	-0.012	0.005	0.008	-0.012
	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)
4+	0.011	0.001	-0.012	0.011	0.002	-0.012
	(0.009)	(0.009)	(0.008)	(0.009)	(0.010)	(0.008)
# of children (Ref = 0 children)						
1	0.005	0.008	-0.013*	0.004	0.008	-0.012*
	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)	(0.005)
2	-0.001	0.017*	-0.016*	-0.001	0.016*	-0.016*
	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)
3	-0.002	0.020	-0.018*	-0.002	0.020	-0.017
	(0.010)	(0.011)	(0.009)	(0.010)	(0.011)	(0.009)
4+	0.047**	-0.006	-0.041***	0.046**	-0.005	-0.041***
	(0.017)	(0.017)	(0.012)	(0.016)	(0.016)	(0.012)
Generation (Ref = Millennial)						
Generation X	0.014**	0.028***	-0.042***	0.014**	0.028***	-0.042***
	(0.005)	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)
Baby Boomer	0.049***	0.003	-0.052***	0.049***	0.003	-0.052***
	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)	(0.006)
Silent Generation	0.093***	-0.067***	-0.026**	0.093***	-0.067***	-0.026**
	(0.012)	(0.012)	(0.009)	(0.012)	(0.012)	(0.009)
Race (Ref = White, non-Hispanic)						
Black, non-Hispanic	-0.012	0.072***	-0.061***	-0.012	0.071***	-0.060***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Asian, non-Hispanic	0.066***	-0.083***	0.017*	0.066***	-0.084***	0.018*
	(0.009)	(0.010)	(0.008)	(0.009)	(0.010)	(0.008)
Hispanic	-0.026***	0.045***	-0.020**	-0.025***	0.043***	-0.018**
	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)
Other, non-Hispanic	-0.025*	0.047***	-0.022*	-0.024*	0.046***	-0.021*
	(0.010)	(0.011)	(0.009)	(0.010)	(0.011)	(0.009)

Education (Ref = Graduate degree)						
Less than high school	-0.024	0.100***	-0.076***	-0.024	0.096***	-0.073***
	(0.013)	(0.015)	(0.016)	(0.013)	(0.015)	(0.016)
High school or some college	-0.055***	0.090***	-0.035***	-0.055***	0.089***	-0.033***
	(0.005)	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)
Associate's or Bachelor's	-0.027***	0.044***	-0.017***	-0.027***	0.044***	-0.017***
	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.004)
Tenure						
Owner without mortgage	0.024***	-0.078***	0.055***	0.022***	-0.073***	0.051***
	(0.005)	(0.006)	(0.004)	(0.005)	(0.006)	(0.004)
Renter, no pay	0.018	-0.022	0.005	0.015	-0.014	-0.001
	(0.018)	(0.019)	(0.017)	(0.018)	(0.019)	(0.017)
Owner with mortgage, late payment	-0.004	0.005	-0.001			
	(0.015)	(0.017)	(0.017)			
Owner with mortgage, on time payment	*Reference Category*					
Renter, late payment	0.023	0.019	-0.042			
	(0.023)	(0.024)	(0.025)			
Renter, on time payment	0.005	-0.022***	0.017***			
	(0.006)	(0.006)	(0.005)			
Owner with mortgage, unconfident about next month				-0.005	0.059***	-0.054***
				(0.011)	(0.011)	(0.013)
Owner with mortgage, confident about next month				*Reference Category*		
Owner with mortgage, next month deferred				0.003	0.016	-0.019
				(0.023)	(0.023)	(0.021)
Renter, unconfident about next month				0.018	0.028*	-0.046***
				(0.012)	(0.012)	(0.014)
Renter, confident about next month				0.002	-0.019**	0.017**
				(0.006)	(0.006)	(0.005)
Renter, next month deferred				0.086	-0.160**	0.074*
				(0.056)	(0.056)	(0.036)
Marital Status (Ref = Single)						
Married or Widowed	0.004	0.030***	-0.034***	0.004	0.029***	-0.033***
	(0.006)	(0.007)	(0.006)	(0.006)	(0.007)	(0.006)
Divorced or Separated	0.005	0.051***	-0.056***	0.005	0.051***	-0.055***
	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)
Work Status (Ref = Unemployment)						
Employed, government	-0.032***	0.041***	-0.009	-0.032***	0.042***	-0.009
	(0.007)	(0.008)	(0.006)	(0.007)	(0.008)	(0.006)
Employed, private sector	-0.039***	0.049***	-0.010	-0.039***	0.049***	-0.010
	(0.005)	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)
Employed, non-profit	-0.043***	0.057***	-0.014*	-0.042***	0.057***	-0.015*
	(0.008)	(0.008)	(0.007)	(0.008)	(0.008)	(0.007)
Employed, Self/Family	-0.009	0.016	-0.007	-0.009	0.016	-0.007
	(0.008)	(0.009)	(0.009)	(0.008)	(0.009)	(0.009)
Income Sources						
Regular income sources	0.039***	-0.069***	0.030***	0.038***	-0.067***	0.028***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Credit cards or loans	-0.003	0.104***	-0.101***	-0.003	0.104***	-0.101***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Savings or selling assets	0.009	0.005	-0.014**	0.009	0.005	-0.014**
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Borrowing from friends or family	0.038***	0.064***	-0.101***	0.037***	0.060***	-0.097***
	(0.009)	(0.009)	(0.011)	(0.009)	(0.009)	(0.011)
Unemployment Insurance	-0.005	0.005	0.001	-0.005	0.004	0.001

	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)
Money from deferred payments	-0.001	0.021*	-0.020	-0.001	0.022*	-0.020*
	(0.009)	(0.010)	(0.010)	(0.090)	(0.010)	(0.010)
SNAP Benefits	0.010	0.010	-0.020	0.010	0.009	-0.019
	(0.010)	(0.011)	(0.011)	(0.010)	(0.010)	(0.011)
Expect employment loss	0.009	0.020**	-0.030***	0.009	0.017**	-0.026***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Difficulty meeting expenses	-0.024***	0.189***	-0.165***	-0.024***	0.186***	-0.163***
	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)
No longer concerned about econ	0.033*	-0.033	-0.000	0.033*	-0.032	-0.001
	(0.015)	(0.017)	(0.014)	(0.015)	(0.017)	(0.014)
Concerned about econ	-0.006	0.029***	-0.023***	-0.006	0.029***	-0.023***
	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)
Food insecure	0.027**	0.040***	-0.068***	0.027*	0.033**	-0.060***
	(0.011)	(0.011)	(0.014)	(0.011)	(0.011)	(0.014)
Anxiety	0.007	0.009	-0.016***	0.007	0.008	-0.015***
	(0.005)	(0.006)	(0.004)	(0.005)	(0.006)	(0.004)
Depression	0.002	0.005	-0.007	0.002	0.004	-0.007
	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)
Delayed medical	0.017***	0.003	-0.021***	0.018***	0.003	-0.020***
	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.004)
Likely to be evicted	-0.008	0.073**	-0.065*	-0.001	0.095***	-0.093***
	(0.028)	(0.028)	(0.032)	(0.018)	(0.018)	(0.022)
Likely to be foreclosed on	0.009	0.061**	-0.070**	0.009	0.038*	-0.047*
	(0.021)	(0.022)	(0.026)	(0.016)	(0.017)	(0.021)
Female	-0.053***	0.048***	0.006	-0.053***	0.047***	0.006
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Week (Ref = Week 22)						
Jan 20 - Feb 1	0.036***	-0.010	-0.026***	0.036***	-0.011	-0.026***
	(0.006)	(0.007)	(0.006)	(0.006)	(0.007)	(0.006)
Feb 3 - 15	0.060***	-0.013	-0.047***	0.061***	-0.014*	-0.046***
	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)	(0.006)
Feb 17 - Mar 1	0.070***	-0.008	-0.062***	0.070***	-0.008	-0.062***
	(0.007)	(0.008)	(0.006)	(0.007)	(0.008)	(0.006)
Mar 3 - 15	0.055***	-0.006	-0.049***	0.056***	-0.008	-0.048***
	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)	(0.007)
Mar 17 - 29	-0.028***	0.006	0.022***	-0.028***	0.006	0.022***
	(0.006)	(0.007)	(0.006)	(0.006)	(0.007)	(0.006)
MSA FE		Yes			Yes	
N		163,045			163,004	

Standard errors reported in parentheses. * p < 0.05 ** p < 0.01 *** p < 0.001

Table 7: OLS Regression on Spending Counts

Dependent Variable: Spending Count (Q19)	Level Counts			Natural Log		
	Nondurables	Other	All Goods and Services	Nondurables	Other	All Goods and Services
Reported EIP Use (Ref: Mostly for spending)						
Mostly for debt	-0.151***	0.018*	-0.082***	-0.076***	0.019***	-0.029***
	(0.012)	(0.009)	(0.017)	(0.006)	(0.005)	(0.007)
Mostly for savings	-0.244***	-0.013	-0.259***	-0.124***	-0.006	-0.112***
	(0.015)	(0.012)	(0.022)	(0.008)	(0.007)	(0.009)
Difficulty meeting expenses (Ref: Not difficult)						
A little difficult	0.162***	0.080***	0.451***	0.087***	0.053***	0.197***
	(0.013)	(0.009)	(0.018)	(0.007)	(0.006)	(0.007)
Somewhat difficult	0.241***	0.126***	0.674***	0.128***	0.081***	0.283***
	(0.014)	(0.010)	(0.020)	(0.007)	(0.006)	(0.008)
Very difficult	0.306***	0.184***	0.868***	0.158***	0.115***	0.347***
	(0.017)	(0.012)	(0.025)	(0.009)	(0.007)	(0.010)
Constant	2.050***	1.293***	2.381***	0.599***	0.185***	0.687***
	(0.011)	(0.008)	(0.016)	(0.006)	(0.005)	(0.006)
N[a]	124,663	97,561	149,482	124,663	97,561	149,482

Standard errors reported in parentheses. * p < 0.05 ** p < 0.01 *** p < 0.001

[a] For each spending count category, only respondents who reported using the stimulus payment for at least one item within the category are used in the estimation.

Table 8: Negative Binomial Regression on Spending Counts

Dependent Variable: Spending Count (Q19)	Marginal Effects			Coefficients		
	Nondurables	Other	All Goods and Services	Nondurables	Other	All Goods and Services
Reported EIP Use (Ref: Mostly for spending)						
Mostly for debt	-0.152***	0.018*	-0.085***	-0.071***	0.013*	-0.030***
	(0.012)	(0.009)	(0.018)	(0.006)	(0.006)	(0.006)
Mostly for savings	-0.249***	-0.013	-0.273***	-0.119***	-0.010	-0.101***
	(0.015)	(0.012)	(0.023)	(0.007)	(0.009)	(0.009)
Difficulty meeting expenses (Ref: Not difficult)						
A little difficult	0.161***	0.0801***	0.453***	0.0803***	0.060***	0.180***
	(0.013)	(0.009)	(0.018)	(0.006)	(0.007)	(0.007)
Somewhat difficult	0.240***	0.127***	0.674***	0.117***	0.093***	0.258***
	(0.014)	(0.010)	(0.020)	(0.007)	(0.008)	(0.008)
Very difficult	0.305***	0.184***	0.865***	0.147***	0.132***	0.320***
	(0.017)	(0.012)	(0.025)	(0.008)	(0.008)	(0.009)
Constant				0.714***	0.257***	0.862***
				(0.005)	(0.006)	(0.006)
N[a]	124,663	97,561	149,482	124,663	97,561	149,482

Standard errors reported in parentheses. * p < 0.05 ** p < 0.01 *** p < 0.001

[a] For each spending count category, only respondents who reported using the stimulus payment for at least one item within the category are used in the estimation.

Table ***9*** presents the marginal effects of logistic regressions where the dependent variable is a binary variables where 1 represents the household reporting using the stimulus payment for the corresponding category and zero otherwise. The results for debt, mortgage, rent, vehicle, utilities and savings are included in this table. These categories were selected because they are the ones where using the stimulus payment "mostly for debt" has a positive, statistically significant effect on the probability of selecting the category. The results for the remaining categories for Q19 (i.e. food, clothing, household supplies, household items, recreational goods, and charity) are included in the Appendix.

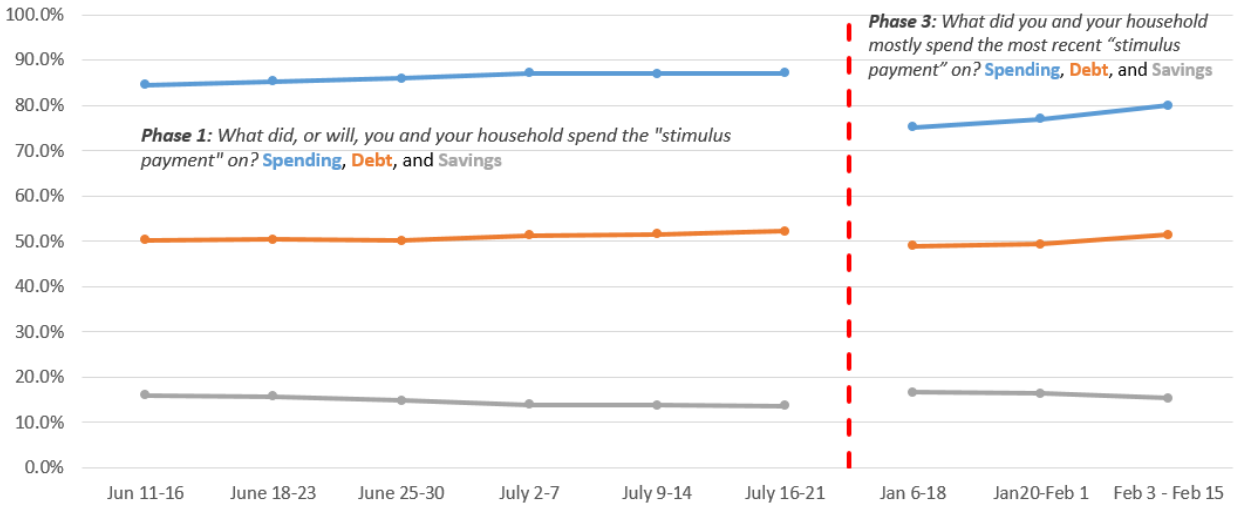
To state, we analyze the results for the debt category, which includes paying down credit cards, student loans, and other debts. As we would expect, respondents who report most using the stimulus to pay debt are more likely to report using the stimulus to pay down credit cards, student loans, and other debts. Interestingly though, respondents who reported mostly using the stimulus to pay debt also are more likely to report using the stimulus for their mortgage as well as their vehicle. Both mortgages and vehicles are items people commonly associate with debt.[43] Additionally, many households that faced financial difficulty were able to delay rent payments, which could include utilities. Some of these respondents could have considered any owed rent as debt. If respondents classified any these expenses as debt then that could have led them to reporting mostly using the stimulus payment for debt.

Evidence for respondents classifying some of these expenses as "debt" can be found by responses to Q15 and Q19 that were collected during June and July 2020 to those collected from January to March 2021. Figure 8 shows the frequency of responses to Q15 during these two periods. The figure clearly shows reported spending during June and July, when shelter was explicitly included in the spending category, was higher than in January to March, when the category definitions were not explicitly provided. Figure 4 shows the frequency of spending, debt, and savings based on grouping responses to Q19. The response rates across all three categories are much more similar, which suggests what respondents consider "debt" will affect how they respond to Q15.[44] Since we classify spending on mortgage, rent, and vehicle as spending on other it, we would expect the marginal effect on mostly for debt to be positive when spending on other is the dependent variable, which is what the data shows.

[43] For vehicles, this would be through an auto loan.

[44] Differences in definitions can also explain differences in reported use between surveys. We can compare reported use of the first stimulus collected with Q15 from the HPS in June and July 2020 to the responses collected by the second wave of the survey conducted by the Philadelphia Federal Reserve (Akana, 2020a). Comparing the raw data shows the HPS reports a significantly lower late of using the stimulus payment for debt, about 12.4% versus 42.4%. Although both surveys defined debt as "credit card, personal loan, and student loan," the HPS explicitly included spending on housing in "mostly for expenses," whereas the Philadelphia Fed included housing expenses in its own category. It should also be noted that the Philadelphia Fed survey question was not mutually exclusive like Q15 of the HPS. Comparing the frequency of "debt" as a response to Q19 of the HPS we get percentages that are much more similar, 41.7% for the HPS. We can also reclassify the responses to the Philadelphia Fed survey and Q19 from the HPS into spending, debt, savings, and housing categories that are more comparable. When we do this we get results that are much more similar than using responses to Q15. We find that about 40.0% of respondents to the Philadelphia Fed survey and 33.6% of HPS respondents report using the stimulus for debt.

Figure 4: EIP Use Based on Responses to Q19



Support for our theory that some respondents may be classifying expenses on mortgage, rent, vehicles, and utilities as debt can be found by analyzing the coefficients for difficulty meeting expenses. Based on the results presented in

Table ***7*** presents the OLS regression results on the level values and natural log of the spending count variables. Since these are count variables, we also present the marginal effects of a negative binomial regression model in Table 8. The regression using the natural log of spending count and the negative binomial produce similar results, and the marginal effects from the negative binomial model are similar to the coefficients from the regression on the levels of spending count. Each model specification is run separately for spending on nondurables, other, and all goods and services. Additionally, the observations for each model included only those respondents who reported using the stimulus for at least one of the items in the corresponding category. For example, only respondents who reported spending their stimulus payment on food, clothing, housing supplies, and/or utilities were included when the dependent variable was spending on nondurables. The respondent was included in the sample for this regression even if they did not report using the stimulus payment for any categories in spending on other; however, any respondent who did not report using the stimulus payment for any of the categories in spending on other were not included in the sample when spending on other was the dependent variable. The following discussion will focus on the results presented in

Table ***7.***

The difficulty households experienced meeting expenses has a significant effect on the diversity with which households spend their stimulus payment. As the level of difficult in meeting expenses increases, the diversity of spending also increases in both levels and percentages. This result is in line with the intuition that households with experiencing more financial difficulty are likely facing difficulty meeting expenses across more categories. Thus, if they are going to spend addition money they receive, in this case the stimulus payment, they will try to spread it across as many categories as possible.

As a check of the validity of the results, we also controlled for how respondents reported "mostly using" their stimulus check (Q15). If respondents are answering the survey accurately then if the report mostly using the stimulus for debt or savings there should be less stimulus payment remaining for spending. Thus, the number of spending categories the respondent reports should be lower. In terms of levels, shown in the columns 2 through 4 of

Table ***7,*** that is what we see. Respondents who report mostly using the stimulus for debt or savings report using the stimulus for few spending categories. This result holds when looking at the natural log, columns 5 through 7, with one important exception. Respondents who report mostly using the stimulus for debt select about 2% more categories in spending on other than respondents who report mostly using the stimulus for spending. We can explore this result a little further by analyzing the likelihood respondents selected a particular category from the list presented in Q19.

Table *6*, households that report difficulty meeting expenses are more likely to report using the stimulus most for debt. However, the results presented in

Table ***9*** show that households experiencing more difficulty meeting expenses are actually less likely to use the stimulus payment for credit cards, student loans, or other debts. If respondents defined debt in such a way that it include only these types of debt then we would expect the marginal effect to be positive and statistically significant, but that is not what we find.

Instead we find that the marginal effect for difficult meeting expenses in the regression on mortgage, rent, vehicle, and utilities are positive and statistically significant. It is possible respondents could have a type of debt in mind when responding to Q15 that is not included in Q19 and not part of "other debts". To check this we run the logit regression on "other," which was included to account for spending categories not listed in Q19. The marginal effects of difficult meeting expenditures are positive and statistically significant, but smaller in magnitude than any of the marginal effects reported in

Table ***9***. Thus, we cannot rule out the possibility that respondents are thinking of a debt not included in Q19; however, we think it is more likely that there are respondents who are considering payments towards mortgages, rent, vehicles, and/or utilities as debt.

Table 9: Logit Marginal Effects for Q19 Responses

Dependent Variable: Spending Count (Q19)	Debt	Mortgage	Rent	Vehicle	Utilities
Reported EIP Use (Ref: Mostly for spending)					
Mostly for debt	0.307***	0.040***	0.022***	0.060***	0.046***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
Mostly for savings	-0.051***	-0.044***	-0.015*	-0.040***	-0.131***
	(0.004)	(0.004)	(0.006)	(0.005)	(0.006)
Difficulty meeting expenses (Ref: Not difficult)					
A little difficult	0.003	0.077***	0.147***	0.089***	0.199***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.005)
Somewhat difficult	-0.036***	0.098***	0.244***	0.137***	0.294***
	(0.005)	(0.004)	(0.005)	(0.005)	(0.006)
Very difficult	-0.105***	0.079***	0.392***	0.181***	0.369***
	(0.006)	(0.005)	(0.007)	(0.006)	(0.007)
N	213,068	213,068	213,068	213,068	213,068

Together, these results suggest respondents experiencing more difficulty meeting expenses will spend the stimulus payment across more categories. Additionally, these respondents are more likely to put their stimulus payment towards mortgage, rent, vehicle, and utility payments and less likely to put it towards paying down credit cards, student loans, and other debts. This suggests respondents who are facing the most financial need are using the stimulus payment to help pay for necessities. Additionally, these results in conjunction with the results from analyzing Q15 suggest respondents are including categories like mortgage and vehicles in their definition of debt. Therefore when comparing data reporting how the stimulus payment was used, it will be important to account for definitional differences between the spending categories.

Conclusion

One of the main provisions of the stimulus packages in the U.S. has been to send income directly to individuals and households during COVID-19 through tax rebates, like during the 2001 and 2008 recessions. How effective the second round of payments have been in providing support has been qualitatively assessed using data from the HPS. Like during previous recessions, consumers were most likely to use their stimulus payment to pay down debt following equally by spending and saving. This is consistent with the 2001 and 2008 experience.

Subjective perceptions of one's own well-being and that of one's household play an important role in the decision by consumers regarding how to use the stimulus payment. Respondents with worse views of their own economic well-being were more likely to use the stimulus payment to "mostly pay off debt" and less likely to use it "mostly for expenses" in the previous

7 days. This result is largely driven by the fact that respondents with worse views of their own economic well-being were more likely to put the stimulus payment towards mortgage, rent, vehicle expenses, and utilities.

The tendency to use the stimulus payment towards debts, and in particular housing related expenses, is similar to how the 2008 rebates were reported being used. Even though the economic situations today are vastly different than what consumers faced in 2008, they still seemed to use the stimulus payments in a similar manner. While the cause of the economic crisis of 2008 was different than what is faced today, both crises presented consumers with tough economic conditions that lowered their sense of well-being and increasing their perceived debt burden. Thus in order to alleviate some of their burden and, hopefully, improve their sense of well-being, households will direct relief payments they receive towards paying off their debts. In particular, debts associated with housing appear to be an area of particular concern.

The tendency for households to direct relief payments towards debt has implications for how policy makers should distribute relief when faced with economic crisis in the future. For example, if given the choice, household will use relief payments to help reduce their debt burden rather than spend it. Therefore, governments might depend less on the spending multiplier as a tool to stimulate the economy. If they want to increase spending in order to stimulate the economy, governments could consider first directing their efforts towards easing the debt burden held by individuals a households and improving the overall sense of well-being. Once the weight of their debt burden has been lessened and their sense of well-being has improved, households are more likely to spend.

Additionally, worsening views of economic well-being led respondents to increase the diversity of their stimulus payment spending. This result suggests policy makers have a broader set of areas towards which they can direct relief when looking to help reduce the impact of an economic crisis on the most effected. Our results suggest that those with worsening views of their economic well-being are more likely to use their stimulus payment for necessities, like food and clothing, and housing related expenditures. In particular, housing related expenditures associated with debt seem to be an area of particular concern.

By analyzing the relationship between the use of the economic impact payments and individuals' and households' social-psychological and economic needs, we are able to gain a deeper insight into what drives spending behavior. The results from this study can be used by researchers to understand the impact of the COVID-19 pandemic on individuals and households. And, the results can provide policymakers with insights regarding how to provide more directed relief during future economic crisis. Our findings also suggest a need to recognize the broader social-psychological and economic situations individuals and their households find themselves in as they apply for and use other social assistant programs.

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Appendix

A. CEQ 2008 versus 2020 stimulus payment use

Table 10: CEQ Use of Stimulus Payment[a]

CEQ Response options for how stimulus was spent in the previous three months[b]	CEQ June 2008 – March 2009 (unweighted n = 5190)	CEQ 2020 June – September (unweighted n = 3,775)[c]
Mostly to increase spending	31.18%	56.16%
Mostly to increase saving	18.19%	24.64%
Mostly to pay off debt	50.64%	17.43%

[a] Data about use of the 2008 stimulus payment came from work conducted by Paulin (2011).
[b] Percentages are restricted to respondents who reported receipt of the stimulus payment.
[c] The percentages are computed by the authors using CEQ data collected from June to September 2020. Prior to June 2020 the EIP receipt and use questions were not included in the CEQ. The percentages do not sum to 100% because 1.77% of respondents reported multiple uses.

B. Recovery Rebate Phase Out Diagrams

Figure 5: CARES Act Recovery Rebate

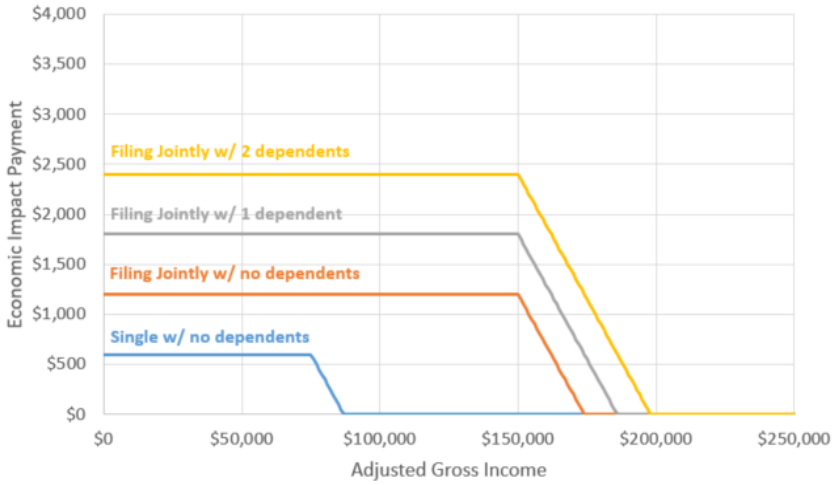


Figure 6: Coronavirus Relief Act Recovery Rebate

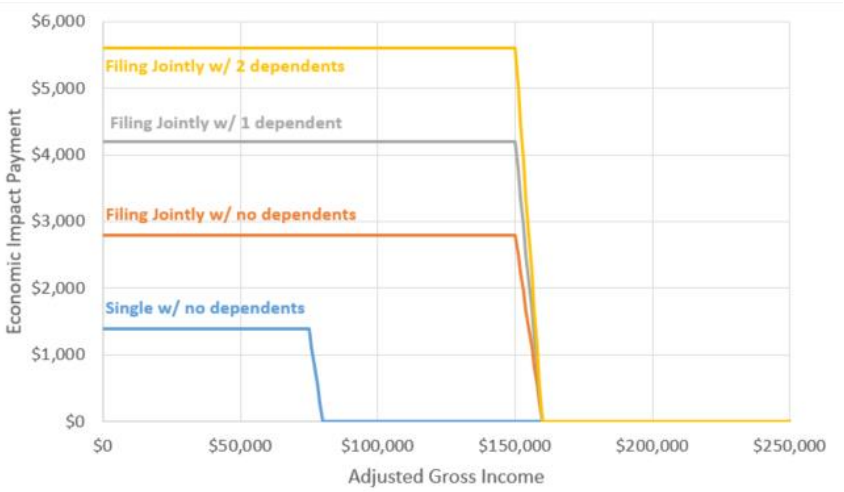
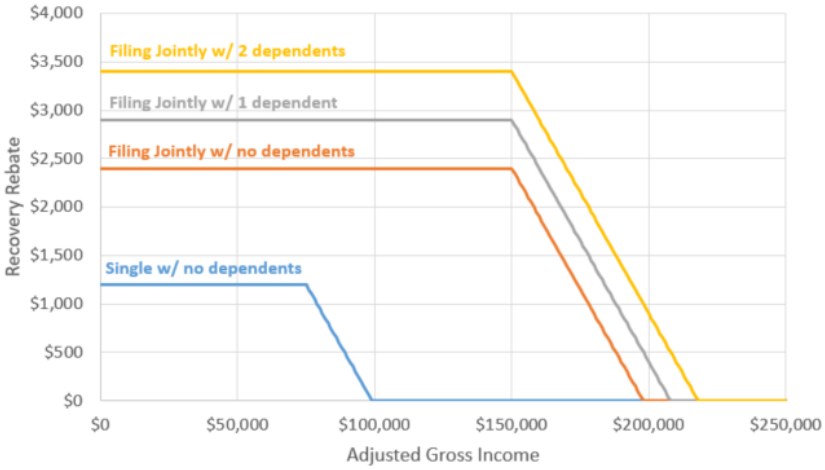


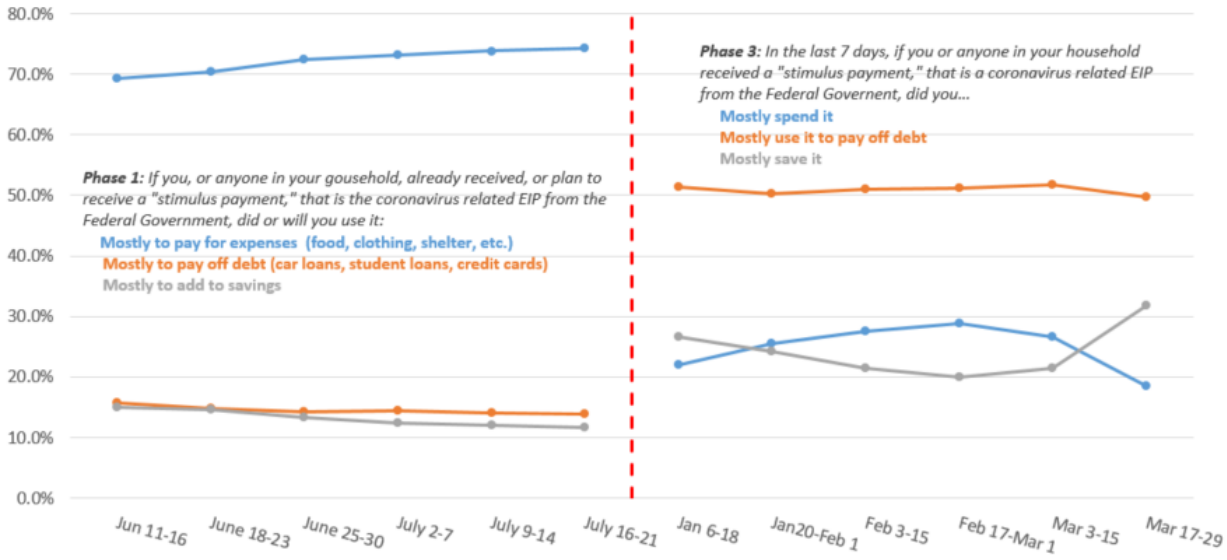
Figure 7: American Rescue Plan Act Recovery Rebate



C. Phase 1 versus Phase 3 EIP Receipt and Use

Figure 8 shows the frequency with which "spending," "debt," and "savings" were selected across each week of the June to July 2020 and January to March 2021 phases of the survey. During the first phase (June to July) of the survey around 70% of respondents selected "mostly to pay for expenses," whereas during the third phase (January to March) only about 25% of respondents selected "mostly spend". Furthermore, the fraction of respondents choosing "debt" increased from about 15% during the first phase to around 50% during the third phase. Although we do not know how respondents chose to categorize expenses during the third phase of the survey, we believe many chose to categorize mortgage payments as "debt" rather than "spending."

Figure 8: EIP Receipt and Use



Support for this theory can be found by analyzing answers to Q19 of the survey, which asked respondents to select from a list all the items they spent (or expected to spend) their stimulus payment on.[45] Two spending options for this question were mortgage and rent. During the first phase of the survey about 51% of respondents said they used or expect to use a portion of the stimulus payment to pay their rent or mortgage. During the third phase of this survey about 38% of respondents chose one of these two answers. If we look at just mortgage the difference between phases becomes even smaller. About 22% of respondents across the first phase and 17% of respondents across the third phase reported using at least a portion of the stimulus payment for their mortgage. The categorization of mortgage as "spending" or "debt" does not explain the entire difference between the results seen in the first and third phases of the survey; however it can explain a significant proportion of the difference.

[45] See the questionnaire provided in the Appendix for the specific question wording and answer options.

D. Phase 3 Household Pulse Survey Questions

The following list of questions are only those used as part of the analysis in this paper. The full phase three questionnaire can be found on the Census HPS website.

Q1. What year were you born? Please enter a number.

- 1933-2003

Q2. Are you (Select only one)

- Male (1)
- Female (2)

Q3. Are you Hispanic, Latino, or Spanish origin? Select Choice

- No, not of Hispanic, Latino, or Spanish origin (1)
- Yes, of Hispanic, Latino, or Spanish origin (2)

Q4. What is your race? Select Choice

- White, alone (1)
- Black, alone (2)
- Asian, alone (3)
- Any other race alone, or race in combination (4)

Q5. What is the highest degree or level of school you have completed? Select only one answer.

- Less than high school (1)
- Some high school (2)
- High school graduate or equivalent (for example GED) (3)
- Some college, but degree not received or is in progress (4)
- Associate's degree (for example AA, AS) (5)
- Bachelor's degree (for example BA, BS, AB) (6)
- Graduate degree (for example master's, professional, doctorate) (7)

Q6. What is your marital status? Select only one answer.

- Now married (1)
- Widowed (2)
- Divorced (3)
- Separated (4)
- Never married (5)

Q7. How many total people –adults and children – currently live in your household, including yourself? Please enter a number.

- 1-40 (whole number)

Q8. How many total under 18 years-old currently live in your household? Please enter a number.

- 0-40 (whole number)

Q9. Have you, or has anyone in your household experienced a loss of employment income since March 13, 2020? Select only one answer.

- Yes (1)
- No (2)

Q10. Do you expect that you or anyone in your household will experience a loss of employment income in the next 4 weeks because of the coronavirus pandemic? Select only one answer.

- Yes (1)
- No (2)

Q11. Now we are going to ask about your employment. In the last 7 days, did you do ANY work for either pay or profit? Select only one answer.

- Yes (1)
- No (2)

Q12. Are you employed by government, by a private company, a nonprofit organization, or were you self-employed or working in a family business? Select only one answers. *(Asked if Q11 = 1)*

- Government (1)
- Private company (2)
- Non-profit organization including tax exempt and charitable organizations (3)
- Self-employed (4)
- Working in a family business (5)

Q15. In the last 7 days, if you or anyone in your household received a "stimulus payment," that is a coronavirus related Economic Impact Payment from the Federal Government, did you: Select only one answer

- Mostly spend it (1)
- Mostly save it (2)
- Mostly use it to pay off debt (3)
- Not applicable, I did not receive the stimulus payment (4)

Q19. What did you and your household mostly spend the most recent "stimulus payment" on? Select all that apply. *(Asked only if Q15 = 1:3)*

- Food (groceries, eating out, take out) (1)
- Clothing (clothing, accessories, shoes) (2)
- Household supplies and personal care products (3)
- Household items (TV, electronics, furniture, appliances) (4)
- Recreational goods (sports and fitness equipment, bicycles, toys, games) (5)

- Rent (6)
- Mortgage (scheduled or monthly) (7)
- Utilities and telecommunications (natural gas, electricity, cable, internet, cellphone) (8)
- Vehicle payments (scheduled or monthly) (9)
- Paying down credit card, student loans, or other debts (10)
- Charitable donations or giving to family members (11)
- Savings or investments (12)
- Other (13)

Q19a, In the last 7 days, how difficult has it been for your household to pay for usual household expenses, including but not limited to food, rent or mortgage, car payments, medical expenses, student loans, and so on? Select only one answer.

- Not at all difficult (1)
- A little difficult (2)
- Somewhat difficult (3)
- Very difficult (4)

Q19c. In the last 7 days, for which of the following reasons have you or your household changed spending? Select all that apply. *(Asked only if Q19b = 1:11)*

- Usual shopping places were closed or had limited hours (e.g., restaurant, doctor/dentist office, health club, hair salon, childcare center) (1)
- Usual shopping places reopened or increased hours (2)
- Concerned about going to public or crowded places or having contact with high-risk people (3)
- No longer concerned about going to public or crowded places or having contact with high-risk people (4)
- Loss of income (5)
- Increased income (6)
- Concerns about being laid off or having hours reduced (7)
- No longer concerned about being laid off or having hours reduced (8)
- Working from home/teleworking (9)
- Resumed working onsite at workplace (10)
- Concerns about the economy (11)
- No longer concerned about the economy (12)
- Other, specify (13)

Q20. Thinking about your experience in the last 7 days, which of the following did you or your household members use to meet your spending needs? Select all that apply.

- Regular income sources like those received before the pandemic (1)
- Credit cards or loans (2)
- Money from savings or selling assets (3)
- Borrowing from friends or family (4)

- Unemployment Insurance (UI) benefit payments (5)
- Stimulus (economic impact) payment (6)
- Money saved from deferred or forgiven payments [to meet your spending needs] (7)
- Supplemental Nutrition Assistance Program (SNAP) (8)

Q24. In the last 7 days, which of these statements best describes the food eaten in your household? Select only one answer.

- Enough of the kinds of food (I/we) wanted to eat (1)
- Enough, but not always the kinds of food (I/we) wanted to eat (2)
- Sometimes not enough to eat (3)
- Often not enough to eat (4)

Q32. Over the last 7 days, how often have you been bothered by the following problems… feeling nervous, anxious, or on edge? Would you say not at all, several days, more than half the days, or nearly every day? Select only one answer.

- Not at all (1)
- Several days (2)
- More than half the days (3)
- Nearly every day (4)

Q33. Over the last 7 days, how often have you been bothered by the following problems… not being able to stop or control worrying? Would you say not at all, several days, more than half the days, or nearly every day? Select only one answer.

- Not at all (1)
- Several days (2)
- More than half the days (3)
- Nearly every day (4)

Q34. Over the last 7 days, how often have you been bothered by… having little interest or pleasure in doing things? Would you say not at all, several days, more than half the days, or nearly every day? Select only one answer.

- Not at all (1)
- Several days (2)
- More than half the days (3)
- Nearly every day (4)

Q35. Over the last 7 days, how often have you been bothered by… feeling down, depressed, or hopeless? Would you say not at all, several days, more than half the days, or nearly every day? Select only one answer.

- Not at all (1)
- Several days (2)
- More than half the days (3)
- Nearly every day (4)

Q37. At any time in the last 4 weeks, did you DELAY getting medical care because of the coronavirus pandemic? Select only one answer.

- Yes (1)
- No (2)

Q38. At any time in the last 4 weeks, did you did you need medical care for something other than coronavirus but DID NOT GET IT because of the coronavirus pandemic? Select only one answer.

- Yes (1)
- No (2)

Q39. Is your house or apartment…? Select only one answer.

- Owned free and clear? (1)
- Owned with a mortgage or loan (including home equity loans)? (2)
- Rented? (3)
- Occupied without payment of rent? (4)

Q40b. Is the household currently caught up on rent payments? Select only one answer. *(Asked only if Q39 = 3)*

- Yes (1)
- No (2)

Q40c. Is the household currently caught up on mortgage payments? Select only one answer. *(Asked only if Q39 = 2)*

- Yes (1)
- No (2)

Q41. How confident are you that your household will be able to pay your next rent or mortgage payment on time? Select only one answer. *(Asked only if Q39 = 2:3)*

- No confidence (1)
- Slight confidence (2)
- Moderate confidence (3)
- High confidence (4)
- Payment is/will be deferred (5)

Q41a. How likely is it that your household will have to leave this home or apartment within the next two months because of eviction? Select only one answer. *(Asked if Q39 = 3 and Q40b = 2)*

- Very likely (1)
- Somewhat likely (2)
- Not very likely (3)
- Not likely at all (4)

Q41b. How likely is it that your household will have to leave this home or apartment within the next two months because of foreclosure? Select only one answer. *(Asked if Q39 = 2 and Q40c = 2)*

- Very likely (1)
- Somewhat likely (2)
- Not very likely (3)
- Not likely at all (4)

Q50. In 2019 what was your total household income before taxes? Select only one answer.

- Less than $25,000 (1)
- $25,000 - $34,999 (2)
- $35,000 - $49,999 (3)
- $50,000 - $74,999 (4)
- $75,000 - $99,999 (5)
- $100,000 - $149,999 (6)
- $150,000 - $199,999 (7)
- $200,000 and above (8)

E. Summary Statistics

Table 11: EIP Question Response Frequency

	Jan 6-18 Week 22	Jan 20-Feb 1 Week 23	Feb 3-15 Week 24	Feb 17-Mar 1 Week 25	Mar 3-15 Week 26	Mar 17-29 Week 27	Jan 6-Mar 29 Overall
Q15 (In the past 7 days)							
Receipt of EIP	61.50%	62.68%	53.48%	45.67%	39.96%	61.61%	54.14%
Mostly spent it	13.52%	15.97%	14.73%	13.16%	10.65%	11.39%	13.24%
Most used to pay off debt	31.64%	31.56%	27.27%	23.42%	20.70%	30.66%	27.53%
Mostly save it	16.35%	15.15%	11.48%	9.09%	8.61%	19.56%	13.37%
Did not receive	38.50%	37.32%	46.52%	54.33%	60.04%	38.39%	45.86%
Q19							
Spending on Nondurables							
0	39.09%	35.79%	31.99%	30.15%	29.88%	39.38%	34.94%
1	23.13%	22.68%	23.01%	22.43%	21.36%	19.08%	21.94%
2	19.36%	20.20%	21.49%	21.33%	22.25%	18.23%	20.30%
3	14.94%	17.33%	18.66%	20.35%	19.95%	16.70%	17.73%
4	3.48%	4.00%	4.85%	5.75%	6.56%	6.59%	5.10%
Spending on Other							
0	51.64%	50.95%	46.55%	44.87%	42.78%	46.59%	47.67%
1	34.53%	33.78%	35.53%	36.02%	36.27%	33.68%	34.81%
2	11.86%	13.36%	15.38%	16.25%	17.41%	16.31%	14.88%
3	1.63%	1.66%	2.31%	2.51%	2.94%	2.91%	2.28%
4+	0.34%	0.25%	0.24%	0.35%	0.59%	0.51%	0.37%
Spending on Goods and Services							
0	26.15%	24.54%	21.12%	19.99%	19.71%	27.92%	23.68%
1	24.22%	22.66%	21.55%	20.24%	19.29%	18.19%	21.16%
2	16.40%	15.52%	16.33%	16.10%	15.16%	13.44%	15.46%
3	15.45%	17.05%	17.29%	17.53%	18.05%	16.16%	16.81%
4	10.20%	11.65%	13.22%	14.05%	14.46%	11.87%	12.37%
5	5.49%	6.21%	7.25%	8.35%	8.90%	8.11%	7.24%
6+	2.10%	2.37%	3.25%	3.75%	4.43%	4.31%	3.28%
Paying down credit cards	30.12%	30.51%	30.88%	31.01%	33.48%	38.44%	32.43%
Savings or Investments	16.90%	16.63%	15.53%	15.93%	17.32%	25.09%	18.09%
Charitable Donations	3.89%	3.82%	3.72%	4.45%	4.51%	4.61%	4.14%

Table 12: June 11 – July 21 2020 *EIP Questions*

	N*	Mean	Min	Max	Median
Q15					
Receipt of EIP	544,368	0.857	0	1	1
Mostly spent it	544,368	0.619	0	1	1
Most used to pay off debt	544,368	0.125	0	1	0
Mostly save it	544,368	0.113	0	1	0
Q19					
Spending on Nondurables	448,784	1.854	0	4	2
Spending on Other	448,784	0.892	0	6	1
Spending on Goods and Services	448,784	2.745	0	10	3
Paying down credit cards	448,784	0.232	0	1	0
Savings or Investments	448,784	0.149	0	1	0
Charitable Donations	448,784	0.057	0	1	0

*The number of observations for Q19 is lower than Q15 because Q15 includes "Did not receive" (94,508 obs) and some respondents did not answer Q19 (1,076 obs).

Table 13: June 11 – July 21 2020 EIP Question Response Frequencies

	Jun 11-16 Week 7	Jun 18-23 Week 8	Jun 25-30 Week 9	Jul 2-7 Week 10	Jul 9-14 Week 11	Jul 16-21 Week 12	Jun 11-Jul 21 Overall
Q15							
Receipt of EIP	85.31%	86.17%	86.30%	85.89%	85.38%	85.17%	85.70%
Mostly spent it	59.05%	60.68%	62.47%	62.83%	63.03%	63.33%	61.90%
Most used to pay off debt	13.47%	12.82%	12.28%	12.39%	12.08%	11.91%	12.49%
Mostly save it	12.79%	12.67%	11.55%	10.68%	10.28%	9.93%	11.32%
Did not receive	14.69%	13.83%	13.70%	14.11%	14.62%	14.83%	14.30%
Q19							
Spending on Nondurables							
0	27.76%	25.98%	24.37%	23.98%	23.40%	22.59%	24.68%
1	15.96%	15.24%	15.10%	15.32%	14.60%	14.74%	15.16%
2	20.03%	21.10%	21.21%	21.34%	21.35%	21.73%	21.13%
3	26.68%	27.43%	28.58%	28.14%	28.99%	28.89%	28.12%
4	9.58%	10.25%	10.73%	11.23%	11.66%	12.04%	10.91%
Spending on Other							
0	40.70%	39.37%	38.67%	37.01%	37.35%	36.66%	38.29%
1	37.72%	37.80%	38.48%	39.60%	38.19%	38.86%	38.44%
2	18.00%	19.51%	19.30%	19.72%	20.85%	20.77%	19.69%
3	3.04%	2.83%	3.05%	3.09%	3.17%	3.21%	3.07%
4+	0.54%	0.50%	0.50%	0.56%	0.44%	0.50%	0.51%
Spending on Goods and Services							
0	18.80%	17.44%	16.32%	15.23%	15.04%	14.37%	16.20%
1	15.64%	14.89%	14.85%	15.12%	14.35%	14.51%	14.89%
2	12.62%	12.63%	11.96%	12.28%	12.48%	12.18%	12.36%
3	18.42%	18.53%	19.03%	19.43%	19.25%	19.39%	19.01%
4	16.91%	18.14%	18.65%	18.28%	18.31%	18.70%	18.17%
5	11.77%	12.46%	13.08%	13.09%	13.48%	13.82%	12.95%
6+	5.84%	5.91%	6.11%	6.57%	7.08%	7.03%	6.42%
Paying down credit cards	24.30%	22.85%	22.92%	22.99%	23.11%	22.90%	23.18%
Savings or Investments	16.13%	15.85%	15.02%	14.19%	14.26%	13.92%	14.89%
Charitable Donations	6.77%	5.80%	5.53%	5.68%	5.15%	5.23%	5.69%

Table 14: General Demographics

	N*	Mean	Min	Max	Median
Generation					
Millennial	441,658	0.357	0	1	0
Generation X	441,658	0.258	0	1	0
Baby Boomer	441,658	0.319	0	1	0
Silent Generation	441,658	0.066	0	1	0
Race					
White, non-Hispanic	441,658	0.660	0	1	1
Black, non-Hispanic	441,658	0.116	0	1	0
Asian, non-Hispanic	441,658	0.046	0	1	0
Hispanic	441,658	0.144	0	1	0
Other, non-Hispanic	441,658	0.035	0	1	0
Education					
Less than high school	441,658	0.074	0	1	0
High school or some college	441,658	0.507	0	1	1
Associate's or Bachelor's	441,658	0.276	0	1	0
Graduate degree	441,658	0.143	0	1	0
Marital Status					
Married or widowed	439,068	0.575	0	1	1
Divorced or separated	439,068	0.162	0	1	0
Never married	439,068	0.263	0	1	0
Tenure					
Owner w/ mortgage	370,582	0.443	0	1	0
Owner w/o mortgage	370,582	0.242	0	1	0
Renter	370,582	0.298	0	1	0
Renter, no pay	370,582	0.018	0	1	0
Income					
Less than $25,000	350,655	0.158	0	1	0
$25,000 - $34,999	350,655	0.117	0	1	0
$35,000 - $49,999	350,655	0.132	0	1	0
$50,000 - $74,999	350,655	0.182	0	1	0
$75,000 - $99,999	350,655	0.128	0	1	0
$100,000 - $149,999	350,655	0.145	0	1	0
$150,000 - $199,999	350,655	0.066	0	1	0
$200,000 and more	350,655	0.072	0	1	0
# of adults	441,658	2.123	1	4	2
1	441,658	0.225	0	1	0
2	441,658	0.525	0	1	1
3	441,658	0.153	0	1	0
4+	441,658	0.097	0	1	0
# of children	441,658	0.664	0	4	0
0	441,658	0.637	0	1	1
1	441,658	0.163	0	1	0
2	441,658	0.125	0	1	0
3	441,658	0.049	0	1	0
4+	441,658	0.026	0	1	0

F. Additional Results from EIP Use Analysis

Table 15: Multinomial Logit Marginal Effects for Respondents Who Reported Receipt

Dependent Variable:		(3)	
EIP Use (Ref: Spending)	Spending	Debt	Savings
Income (Ref = Less than $25,000			
$25,000 - $34,999	-0.025**	0.026**	-0.001
	(0.009)	(0.009)	(0.009)
$35,000 - $49,999	-0.017*	0.026**	-0.009
	(0.008)	(0.009)	(0.009)
$50,000 - $74,999	-0.003	0.019*	-0.017*
	(0.008)	(0.009)	(0.008)
$75,000 - $99,999	0.002	-0.004	0.002
	(0.009)	(0.010)	(0.008)
$100,000 - $149,999	0.008	-0.022*	0.014
	(0.009)	(0.010)	(0.009)
$150,000 - $$199-999	0.032**	-0.043***	0.011
	(0.012)	(0.012)	(0.011)
$200,000 and above	0.043**	-0.089***	0.046***
	(0.015)	(0.016)	(0.013)
Marital Status (Ref = Never married)			
Married or widowed	0.004	0.029***	-0.033***
	(0.006)	(0.009)	(0.006)
Divorced or separated	0.004	0.051***	-0.055***
	(0.007)	(0.008)	(0.007)
# of adults (Ref = 1 adult)			
2	0.002	0.004	-0.005
	(0.006)	(0.006)	(0.005)
3	0.004	0.008	-0.012
	(0.007)	(0.008)	(0.007)
4+	0.010	0.002	-0.012
	(0.008)	(0.009)	(0.008)
# of children (Ref = 0 children)			
1	0.004	0.008	-0.012*
	(0.006)	(0.006)	(0.005)
2	-0.001	0.016*	-0.015*
	(0.007)	(0.008)	(0.007)
3	-0.002	0.019	-0.017
	(0.010)	(0.011)	(0.009)
4+	0.044**	-0.004	-0.040***
	(0.015)	(0.015)	(0.012)
Generation (Ref = Millennial)			
Generation X	0.015**	0.027***	-0.042***
	(0.005)	(0.006)	(0.005)
Baby Boomer	0.049***	0.003	-0.052***
	(0.007)	(0.007)	(0.006)
Silent Generation	0.093***	-0.067***	-0.026**
	(0.012)	(0.012)	(0.009)
Race (Ref = White, non-Hispanic)			
Black, non-Hispanic	-0.013	0.071***	-0.059***
	(0.008)	(0.008)	(0.008)

Asian, non-Hispanic	0.065***	-0.083***	0.018*
	(0.009)	(0.010)	(0.008)
Hispanic	-0.026***	0.044***	-0.018**
	(0.007)	(0.008)	(0.007)
Other, non-Hispanic	-0.025*	0.046***	-0.021*
	(0.010)	(0.011)	(0.009)
Education (Ref = Graduate degree)			
Less than high school	-0.023	0.096***	-0.073***
	(0.013)	(0.015)	(0.016)
High school or some college	-0.055***	0.089***	-0.033***
	(0.005)	(0.006)	(0.005)
Associate's or Bachelor's	-0.027***	0.043***	-0.017***
	(0.004)	(0.005)	(0.004)
Tenure			
Owner without mortgage	0.022***	-0.074***	0.052***
	(0.005)	(0.006)	(0.004)
Renter, no pay	0.016	-0.016	-0.000
	(0.018)	(0.019)	(0.017)
Owner with mortgage, last late and next unconfident	-0.012	0.069**	-0.057*
	(0.023)	(0.024)	(0.027)
Owner with mortgage, last late and next confident	0.001	-0.023	0.022
	(0.017)	(0.019)	(0.020)
Owner with mortgage, last late and next deferred	0.023	0.053	-0.076*
	(0.031)	(0.032)	(0.033)
Owner with mortgage, last on time and next unconfident	-0.001	0.052***	-0.051***
	(0.012)	(0.013)	(0.014)
Owner with mortgage, last on time and next confident	*Reference Category*		
Owner with mortgage, last on time and next deferred	-0.004	-0.010	0.014
	(0.035)	(0.036)	(0.027)
Renter, last late and next unconfident	0.019	0.097***	-0.115***
	(0.030)	(0.029)	(0.033)
Renter, last late and next confident	0.024	0.003	-0.027
	(0.025)	(0.026)	(0.028)
Renter, last late and next deferred	0.186	-0.223*	0.037
	(0.097)	(0.087)	(0.089)
Renter, last on time and next unconfident	0.024	0.014	-0.038*
	(0.013)	(0.013)	(0.015)
Renter, last on time and next confident	0.002	-0.020**	0.019***
	(0.006)	(0.006)	(0.005)
Renter, last on time and next deferred	0.001	-0.073	0.071
	(0.049)	(0.046)	(0.040)
Work Status (Ref = Unemployment)			
Employed, government	-0.032***	0.041***	-0.010
	(0.007)	(0.008)	(0.006)
Employed, private sector	-0.039***	0.0490***	-0.010
	(0.005)	(0.006)	(0.005)
Employed, non-profit	-0.042***	0.057***	-0.015*
	(0.008)	(0.008)	(0.007)
Employed, Self/Family	-0.009	0.016	-0.007
	(0.008)	(0.009)	(0.009)
Income Sources			

Regular income sources	0.039***	-0.067***	0.028***
	(0.006)	(0.006)	(0.006)
Credit cards or loans	-0.003	0.104***	-0.101***
	(0.005)	(0.005)	(0.005)
Savings or selling assets	0.009	0.005	-0.014**
	(0.005)	(0.005)	(0.005)
Borrowing from friends or family	0.037***	0.059***	-0.097***
	(0.009)	(0.009)	(0.011)
Unemployment Insurance	-0.005	0.004	0.001
	(0.007)	(0.008)	(0.007)
Money from deferred payments	-0.002	0.021*	-0.020
	(0.009)	(0.010)	(0.010)
SNAP Benefits	0.010	0.009	-0.019
	(0.010)	(0.010)	(0.011)
Expect employment loss	0.009	0.017**	-0.026***
	(0.006)	(0.006)	(0.006)
Difficulty meeting expenses	-0.024***	0.187***	-0.163***
	(0.005)	(0.005)	(0.004)
No longer concerned about econ	0.032*	-0.031	-0.001
	(0.015)	(0.017)	(0.014)
Concerned about econ	-0.006	0.029***	-0.023***
	(0.005)	(0.005)	(0.004)
Food insecure	0.027*	0.0330**	-0.060***
	(0.011)	(0.011)	(0.01)
Anxiety	0.007	0.009	-0.016***
	(0.005)	(0.006)	(0.004)
Depression	0.002	0.005	-0.007
	(0.005)	(0.005)	(0.004)
Delayed medical	0.018***	0.003	-0.020***
	(0.004)	(0.005)	(0.004)
Likely to be evicted	-0.007	0.040	-0.033
	(0.030)	(0.029)	(0.033)
Likely to be foreclosed on	0.014	0.035	-0.050
	(0.022)	(0.023)	(0.027)
Female	-0.053***	0.047***	0.006
	(0.004)	(0.004)	(0.004)
Week (Ref = Week 22)			
Jan 20 - Feb 1	0.036***	-0.011	-0.026***
	(0.006)	(0.007)	(0.006)
Feb 3 - 15	0.061***	-0.014*	-0.046***
	(0.007)	(0.007)	(0.006)
Feb 17 - Mar 1	0.070***	-0.008	-0.062***
	(0.007)	(0.008)	(0.006)
Mar 3 - 15	0.056***	-0.008	-0.048***
	(0.007)	(0.008)	(0.007)
Mar 17 - 29	-0.027***	0.006	0.022***
	(0.006)	(0.007)	(0.006)
MSA FE		Yes	
N		163,004	

Standard errors reported in parentheses. * p < 0.05 ** p < 0.01 *** p < 0.001

Table 16: Logit Marginal Effects for Q19 Responses

Dependent Variable: Spending Count (Q19)	Food	Clothing	Household Supplies	Household Items	Recreational Goods	Charity	Savings
Reported EIP Use (Ref: Mostly for spending)							
Mostly for debt	-0.186***	-0.092***	-0.146***	-0.092***	-0.044***	-0.039***	0.014***
	(0.005)	(0.004)	(0.005)	(0.003)	(0.002)	(0.002)	(0.003)
Mostly for savings	-0.234***	-0.103***	-0.212***	-0.091***	-0.039***	-0.029***	0.406***
	(0.005)	(0.004)	(0.006)	(0.003)	(0.002)	(0.002)	(0.005)
Difficulty meeting expenses (Ref: Not difficult)							
A little difficult	0.212***	0.036***	0.132***	-0.026***	-0.019***	-0.036***	-0.077***
	(0.005)	(0.003)	(0.005)	(0.002)	(0.002)	(0.002)	(0.004)
Somewhat difficult	0.267***	0.042***	0.175***	-0.036***	-0.023***	-0.045***	-0.111***
	(0.006)	(0.004)	(0.006)	(0.003)	(0.002)	(0.002)	(0.004)
Very difficult	0.285***	0.050***	0.189***	-0.039***	-0.021***	-0.047***	-0.161***
	(0.007)	(0.005)	(0.007)	(0.003)	(0.002)	(0.002)	(0.005)
N	213,068	213,068	213,068	213,068	213,068	213,068	213,068

Standard errors reported in parentheses. * p < 0.05 ** p < 0.01 *** p < 0.001